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NEAR TYCHO**

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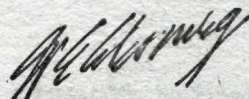
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VOLUME XIII
NUMBER 4

JUNE
1934

ASTOUNDING

STORIES

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Cover Painting by Howard V. Brown

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20x5.25-21	2.40	.85
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31x5.25-21	3.25	30x3.75-21	2.35
32x5.50-18	3.25	30x3.75-21	2.35
29x5.50-19	3.35	30x3.75-21	2.35
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Do I seem to be rubbing it in and bragging? I don't mean to. But I am deadly serious about asking you to help me to help our magazine hold the pace it is setting—and just as serious about giving your friends the chance to read **THE SKYLARK OF VALERON** instead of regretting that they missed it.

We have not resorted to trickery of any kind to keep our readers. We have worked hard, believe me, to build a standard. We have sought the best in super-science and have given it to you. We have done research. In "Lo!" we give you the outstanding fact-book of super-science phenomena of the last decade. We are building variety of appeal where some thought there was nothing new.

"Sidewise in Time" in this issue is new; a new conception; something to think about.

As to enlarging Brass Tacks. Many requests have been made. I'll try. Maybe we can get more words on each page if we change our body type. I'll keep faith with you, never fear, so long as you keep faith with me in my request.

But I think I've proved my good faith through this announcement—don't you?

—The Editor.



To the right they could see across a rift into

*Illustrated by
Howard V. Brown*

SIDEWISE

FOREWORD.

LOOKING BACK, it seems strange that no one but Professor Minott figured the thing out in advance. The indications were more than plain. In early December of 1934 Professor Michaelson announced his finding that the speed of light was not an absolute—could not be considered invariable. That, of course, was one

of the first indications of what was to happen.

A second indication came on February 15th, when at 12:40 p. m., Greenwich mean time, the sun suddenly shone blue-white and the enormously increased rate of radiation raised the temperature of the earth's surface by twenty-two degrees Fahrenheit in five minutes. At the end of the five minutes, the sun went back to its normal rate of



one age—to the left, into another— And then—

IN TIME

Thought-variant
by Murray Leinster

radiation without any other symptom of disturbance.

A great many bids for scientific fame followed, of course, but no plausible explanation of the phenomenon accounted for a total lack of after disturbances in the sun's photosphere.

For a third clear forerunner of the events of June, on March 10th the male giraffe in the Bronx Zoölogical Park, in New York, ceased to eat.

In the nine days following, it changed its form, absorbing all its extremities, even its neck and head, into an extraordinary, egg-shaped mass of still-living flesh and bone which on the tenth day began to divide spontaneously and on the twelfth was two slightly pulsating fleshy masses.

A day later still, bumps appeared on the two masses. They grew, took form and design, and twenty days

after the beginning of the phenomenon were legs, necks, and heads. Then two giraffes, both male, moved about the giraffe inclosure. Each was slightly less than half the weight of the original animal. They were identically marked. And they ate and moved and in every way seemed normal though immature animals.

An exactly similar occurrence was reported from the Argentine Republic, in which a steer from the pampas was going through the same extraordinary method of reproduction under the critical eyes of Argentine scientists.

Nowadays it seems incredible that the scientists of 1935 should not have understood the meaning of these oddities. We now know something of the type of strain which produced them, though they no longer occur. But between January and June of 1935 the news services of the nation were flooded with items of similar import.

For two days the Ohio River flowed upstream. For six hours the trees in Euclid Park, in Cleveland, lashed their branches madly as if in a terrific storm, though not a breath of wind was stirring. And in New Orleans, near the last of May, fishes swam up out of the Mississippi River through the air, proceeded to "drown" in the air which inexplicably upheld them, and then turned belly up and floated placidly at an imaginary water level some fifteen feet above the pavements of the city.

But it seems clear that Professor Minott was the only man in the world who even guessed the meaning of these—to us—clear-cut indications of the later events. Professor Minott was instructor in mathematics on the faculty of Robinson College in Fredericksburg, Va. We know that he anticipated

very nearly every one of the things which later startled and frightened the world, and not only our world. But he kept his mouth shut.

Robinson College was small. It had even been termed a "jerkwater" college without offending anybody but the faculty and certain sensitive alumni. For a mere professor of mathematics to make public the theory Minott had formed would not even be news. It would be taken as stark insanity. Moreover, those who believed it would be scared. So he kept his mouth shut.

Professor Minott possessed courage, bitterness, and a certain cold-blooded daring, but neither wealth nor influence. He had more than a little knowledge of mathematical physics and his calculations show extraordinary knowledge of the laws of probability, but he had very little patience with problems in ethics. And he was possessed by a particularly fierce passion for Maida Haynes, daughter of the professor of Romance languages, and had practically no chance to win even her attention over the competition of most of the student body.

So much of explanation is necessary, because no one but just such a person as Professor Minott would have forecast what was to happen and then prepare for it in the fashion in which he did.

We know from his notes that he considered the probability of disaster as a shade better than four to one. It is a very great pity that we do not have his calculations. There is much that our scientists do not understand even yet. The notes Professor Minott left behind have been invaluable, but there are obvious gaps in them. He must have taken most of his notes—and those the most valuable—into that unguessed-at place where he conceiv-

ably now lives and very probably works.

He would be amused, no doubt, at the diligence with which his most unconsidered scribble is now examined and inspected and discussed by the greatest minds of our time and space. And perhaps—it is quite probable—he may have invented a word for the scope of the catastrophe we escaped. We have none as yet.

There is no word to describe a disaster in which not only the earth but our whole solar system might have been destroyed; not only our solar system but our galaxy; not only our galaxy but every other island universe in all of the space we know; more than that, the destruction of all space as we know it; and even beyond that the destruction of time, meaning not only the obliteration of present and future but even the annihilation of the past so that it would never have been. And then, besides, those other strange states of existence we learned of, those other universes, those other pasts and futures—all to be shattered into nothingness. There is no word for such a catastrophe.

It would be interesting to know what Professor Minott termed it to himself, as he coolly prepared to take advantage of the one chance in four of survival, if that should be the one to eventuate. But it is easier to wonder how he felt on the evening before the fifth of June, in 1935. We do not know. We cannot know. All we can be certain of is how we felt—and what happened.

I.

IT WAS half past seven a. m. of June 5, 1935. The city of Joplin, Missouri, awaked from a comfortable, summer-night sleep. Dew glis-

tened upon grass blades and leaves and the filmy webs of morning spiders glittered like diamond dust in the early sunshine. In the most easterly suburb a high-school boy, yawning, came somnolently out of his house to mow the lawn before schooltime. A rather rickety family car roared, a block away. It backfired, stopped, roared again, and throttled down to a steady, waiting hum. The voices of children sounded among the houses. A colored washerwoman appeared, striding beneath the trees which lined this strictly residential street.

From an upper window a radio blatted: "*—one, two, three, four! Higher, now!—three, four! Put your weight into it!—two, three, four!*" The radio suddenly squawked and began to emit an insistent, mechanical shriek which changed again to a squawk and then a terrific sound as of all the static of ten thousand thunderstorms on the air at once. Then it was silent.

The high-school boy leaned mournfully on the push bar of the lawn mower. At the instant the static ended, the boy sat down suddenly on the dew-wet grass. The colored woman reeled and grabbed frantically at the nearest tree trunk. The basket of wash toppled and spilled in a snowstorm of starched, varicolored clothing. Howls of terror from children. Sharp shrieks from women. "*Earthquake! Earthquake!*" Figures appeared running, pouring out of houses. Some one fled out to a sleeping porch, slid down a supporting column, and tripped over a rosebush in his pajamas. In seconds, it seemed, the entire population of the street was out-of-doors.

And then there was a queer, blank silence. There was no earthquake. No house had fallen. No chimney

had cracked. Not so much as a dish or windowpane had made a sound in smashing. The sensation every human being had felt was not an actual shaking of the ground. There had been movement, yes, and of the earth, but no such movement as any human being had ever dreamed of before. These people were to learn of that movement much later. Now they stared blankly at each other.

And in the sudden, dead silence broken only by the hum of an idling car and the wail of a frightened baby, a new sound became audible. It was the tramp of marching feet. With it came a curious clanking and clattering noise. And then a marked command, which was definitely not in the English language.

Down the street of a suburb of Joplin, Missouri, on June 5, in the year of our Lord 1935, came a file of spear-armed, shield-bearing soldiers in the short, skirtlike togas of ancient Rome. They wore helmets upon their heads. They peered about as if they were as blankly amazed as the citizens of Joplin who regarded them. A long column of marching men came into view, every man with shield and spear and the indefinable air of being used to just such weapons.

They halted at another barked order. A wizened little man with a short sword snapped a question at the staring Americans. The high-school boy jumped. The wizened man roared his question again. The high-school boy stammered, and painfully formed syllables with his lips. The wizened man grunted in satisfaction. He talked, articulating clearly if impatiently. And the high-school boy turned dazedly to the other Americans.

"He wants to know the name of this town," he said, unbelieving his own ears. "He's talking Latin, like

I learn in school. He says this town isn't on the road maps, and he doesn't know where he is. But all the same he takes possession of it in the name of the Emperor Valerius Fabricius, emperor of Rome and the far corners of the earth." And then the school-boy stuttered: "He—he says these are the first six cohorts of the Forty-second Legion, on garrison duty in Messalia. That—that's supposed to be two days' march up that way."

He pointed in the direction of St. Louis.

The idling motor car roared suddenly into life. Its gears whined and it came rolling out into the street. Its horn honked peremptorily for passage through the shield-clad soldiers. They gaped at it. It honked again and moved toward them.

A roared order, and they flung themselves upon it, spears thrusting, short swords stabbing. Up to this instant there was not one single inhabitant of Joplin who did not believe the spear-armed soldiers were motion-picture actors, or masqueraders, or something else equally insane but credible. But there was nothing make-believe about their attack on the car. They assaulted it as if it were a strange and probably deadly beast. They flung themselves into battle with it in a grotesquely reckless valor.

And there was nothing at all make-believe in the thoroughness and completeness with which they speared Mr. Horace B. Davis, who had only intended to drive down to the cotton-brokerage office of which he was chief clerk. They thought he was driving this strange beast to slaughter them, and they slaughtered him instead. The high-school boy saw them do it, growing whiter and whiter as he watched. When a

swordsman approached the wizened man and displayed the severed head of Mr. Davis, with the spectacles dangling grotesquely from one ear, the high-school boy fainted dead away.

II.

IT WAS sunrise of June 5, 1935. Cyrus Harding gulped down his breakfast in the pale-gray dawn. He had felt very dizzy and sick for just a moment, some little while since, but he was himself again now. The smell of frying filled the kitchen. His wife cooked. Cyrus Harding ate. He made noises as he emptied his plate. His hands were gnarled and work-worn, but his expression was of complacent satisfaction. He looked at a calendar hung on the wall, a Christmas sentiment from the Bryan Feed & Fertilizer Co., in Bryan, Ohio.

"Sheriff's goin' to sell out Amos to-day," he said comfortably. "I figger I'll get that north forty cheap."

His wife said tiredly: "He's been offerin' to sell it to you for a year."

"Yep," agreed Cyrus Harding more complacently still. "Comin' down on the price, too. But nobuddy'll bid against me at the sale. They know I want it bad, an' I ain't a good neighbor to have when somebuddy takes somethin' from under my nose. Folks know it. I'll git it a lot cheaper'n Amos offered it to me for. He wanted to sell it t'meet his int'rest an' hol' on another year. I'll git it for half that."

He stood up and wiped his mouth. He strode to the door.

"That hired man shoul'da got a good start with his harrowin'," he said expansively. "I'll take a look an' go over to the sale."

He went to the kitchen door and opened it. Then his mouth dropped

open. The view from this doorway was normally that of a not especially neat barnyard, with beyond it farmland flat as a floor and cultivated to the very fence rails, with a promising crop of corn as a border against the horizon.

Now the view was quite otherwise. All was normal as far as the barn. But beyond the barn was delirium. Huge, spreading tree ferns soared upward a hundred feet. Lacy, foliated branches formed a roof of incredible density above sheer jungle such as no man on earth had ever seen before. The jungles of the Amazon basin were parklike by comparison with its thickness. It was a riotous tangle of living vegetation in which growth was battle, and battle was life, and life was deadly, merciless conflict.

No man could have forced his way ten feet through such a wilderness. From it came a foetid exhalation which was part decay and part lush, rank, growing things, and part the overpowering perfumes of glaringly vivid flowers. It was jungle such as palæobotanists have described as existing in the Carboniferous period; as the source of our coal beds.

"It—it ain't so!" said Cyrus Harding weakly. "It—ain't so!"

His wife did not reply. She had not seen. Wearily, she began to clean up after her lord and master's meal.

He went down the kitchen steps, staring and shaken. He moved toward this impossible apparition which covered his crops. It did not disappear as he neared it. He went within twenty feet of it and stopped, still staring, still unbelieving, beginning to entertain the monstrous supposition that he had gone insane.

Then something moved in the jungle. A long, snaky neck, feet thick

at its base and tapering to a mere sixteen inches behind a head the size of a barrel. The neck reached out the twenty feet to him. Cold eyes regarded him abstractedly. The mouth opened. Cyrus Harding screamed.

His wife raised her eyes. She looked through the open door and saw the jungle. She saw the jaws close upon her husband. She saw colossal, abstracted eyes half close as the something gulped, and partly choked, and swallowed—— She saw a lump in the monstrous neck move from the relatively slender portion just behind the head to the feet-thick section projecting from the jungle. She saw the head withdraw into the jungle and instantly be lost to sight.

Cyrus Harding's widow was very pale. She put on her hat and went out of the front door. She began to walk toward the house of the nearest neighbor. As she went, she said steadily to herself:

"It's come. I'm crazy. They'll have to put me in an asylum. But I won't have to stand him any more. I won't have to stand him any more!"

IT WAS noon of June 5, 1935. The cell door opened and a very grave, whiskered man in a curious gray uniform came in. He tapped the prisoner gently on the shoulder.

"I'm Dr. Holloway," he said encouragingly. "Suppose you tell me, suh, just what happened t'you? I'm right sure it can all be straightened out."

The prisoner sputtered: "Why—why—dammit," he protested, "I drove down from Louisville this morning. I had a dizzy spell and—well—I must have missed my road, because suddenly I noticed that everything around me was unfamil-

iar. And then a man in a gray uniform yelled at me, and a minute later he began to shoot, and the first thing I knew they'd arrested me for having the American flag painted on my car! I'm a traveling salesman for the Uncle Sam Candy Bar Co! Dammit, it's funny when a man can't fly his own country's flag——"

"In your own country, of co'se," assented the doctor comfortingly. "But you must know, suh, that we don't allow any flag but ouah own to be displayed heah. You violated ouah laws, suh."

"Your laws!" The prisoner stared blankly. "What laws? Where in the United States is it illegal to fly the American flag?"

"Nowheah in the United States, suh." The doctor smiled. "You must have crossed ouah border un-awares, suh. I will be frank, an' admit that it was suspected you were insane. I see now that it was just a mistake."

"Border—United——" The prisoner gasped. "I'm not in the United States? I'm not? Then where in hell am I?"

"Ten miles, suh, within the borders of the Confederacy," said the doctor, and laughed. "A queer mistake, suh, but theah was no intention of insult. You'll be released at once. Theah is enough tension between Washington an' Richmond without another border incident to upset ouah hot-heads."

"Confederacy?" The prisoner choked. "You can't—you don't mean the Confederate States——"

"Of co'se, suh. The Confederate States of North America. Why not?"

The prisoner gulped. "I—I've gone mad!" he stammered. "I must be mad! There was Gettysburg—there was——"

"Gettysburg? Oh, yes!" The

doctor nodded indulgently. "We are very proud of ouah history, suh. You refer to the battle in the war of separation, when the fate of the Confederacy rested on ten minutes' time. I have often wondered what would have been the result if Pickett's charge had been driven back. It was Pickett's charge that gained the day for us, suh. England recognized the Confederacy two days later, France in another week an' with unlimited credit abroad we won out. But it was a tight squeeze, suh!"

The prisoner gasped again. He stared out of the window. And opposite the jail stood an unquestionable courthouse. Upon the courthouse stood a flagpole. And spread gloriously in the breeze above a government building floated the Stars and Bars of the Confederacy!

IT WAS night of June 5, 1935. The postmaster of North Centerville, Massachusetts, came out of his cubby-hole to listen to the narrative. The pot-bellied stove of the general store sent a comfortable if unnecessary glow about. The eyewitness chuckled.

"Yeah. They come around the cape, thirty or forty of 'em in a boat all o' sixty feet long with a crazy square sail drawin'. Round things on the gunnel like—like shields. An' rowin' like hell! They stopped when they saw the town an' looked s'prised. Then they hailed us, talkin' some lingo that wa'n't American. Ole Peterson, he near dropped his line, with a fish on it, too. Then he tried to talk back. They hadda lotta trouble understandin' him, or made out to. Then they turned around an' rowed back. Actors or somethin', tryin' to play a joke. It fell flat, though. Maybe some o' those rich folks up the coast pullin' it. Ho!

Ho! Ole says they was talkin' a funny, old-fashioned Skowegian. They told him they was from Leifsholm, or somethin' like that, just up the coast. That they couldn't make out how our town got here. They'd never see it before! Can y' imagine that? Ole says they were wikin's, an' they called this place Winland, an' says—— What's that?"

A sudden hubbub arose in the night. Screams. Cries. A shotgun boomed dully. The loafers in the general store crowded out on the porch. Flames rose from half a dozen places on the water front. In their light could be seen a full dozen serpent ships, speeding for the shore, propelled by oars. From four of their number, already beached, dark figures had poured. Firelight glinted on swords, on shields. A woman screamed as a huge, yellow-maned man seized her. His brazen helmet and shield glittered. He was laughing. Then a figure in overalls hurtled toward the blond giant, an ax held threateningly.

The giant cut him down with an already dripping blade and roared. Men rushed to him and they plunged on to loot and burn. More of the armored figures leaped to the sand from another beached ship. Another house roared flames skyward.

III.

AND AT half past ten a. m. on the morning of June 5th, Professor Minott turned upon the party of students with a revolver in each hand. Gone was the appearance of an instructor whose most destructive possibility was a below-passing mark in mathematics. He had guns in his hands now, instead of chalk or pencil, and his eyes were glowing even as he smiled frostily. The four girls gasped. The young men, accus-

tomed to seeing him only in a classroom, realized that he not only could use the weapons in his hands, but that he would. And suddenly they respected him as they would respect, say, a burglar or a prominent kidnaper or a gang leader. He was raised far above the level of a mere mathematics professor. He became instantly a leader, and, by virtue of his weapons, even a ruler.

"As you see," said Professor Minott evenly, "I have anticipated the situation in which we find ourselves. I am prepared for it, to a certain extent. At any moment not only we, but the entire human race may be wiped out with a completeness of which you can form no idea. But there is also a chance of survival. And I intend to make the most of my survival—if we do live."

He looked steadily from one to another of the students who had followed him to explore the extraordinary appearance of a sequoia forest north of Fredericksburg.

"I know what has happened," said Professor Minott. "I know also what is likely to happen. And I know what I intend to do about it. Any of you who are prepared to follow me, say so. Any of you who object—well—I can't have mutinies! I'll shoot him!"

"But—professor," said Blake nervously, "we ought to get the girls home—"

"They will never go home," said Professor Minott calmly. "Neither will you, nor any of us. As soon as you're convinced that I'm quite ready to use these weapons, I'll tell you what's happened and what it means. I've been preparing for it for weeks."

TALL TREES rose around the party. Giant trees. Magnificent trees. They towered two hundred

and fifty feet into the air, and their air of venerable calm was at once the most convincing evidence of their actuality, and the most improbable of all the things which had happened in the neighborhood of Fredericksburg, Virginia. The little group of people sat their horses affrightedly beneath the monsters of the forest. Minott regarded them estimatingly—these three young men and four girls, all students of Robinson College. Professor Minott was now no longer the faculty member in charge of a party of exploration, but a definitely ruthless leader.

At half past eight a. m. on June 5, 1935, the inhabitants of Fredericksburg had felt a curious, unanimous dizziness. It passed. The sun shone brightly. There seemed to be no noticeable change in any of the facts of everyday existence. But within an hour the sleepy little town was buzzing with excitement. The road to Washington—Route One on all road maps—ceased abruptly some three miles north. A colossal, a gigantic forest had appeared magically to block the way.

Telegraphic communication with Washington had ceased. Even the Washington broadcasting stations were no longer on the air. The trees of the extraordinary forest were tall beyond the experience of any human being in town. They looked like the photographs of the giant sequoias on the Pacific Coast, but—well, the thing was simply impossible.

In an hour and a half, Professor Minott had organized a party of sight-seers among the students. He seemed to pick his party with a queer definiteness of decision. Three young men and four girls. They would have piled into a rickety car owned by one of the boys, but Professor Minott negated the idea

"The road ends at the forest," he said, smiling. "I'd rather like to explore a magic forest. Suppose we ride horseback? I'll arrange for horses."

In ten minutes the horses appeared. The girls had vanished to get into riding breeches or knickers. They noted appreciatively on their return that besides the saddles, the horses had saddlebags slung in place. Again Professor Minott smiled.

"We're exploring," he said humorously. "We must dress the part. Also, we'll probably want some lunch. And we can bring back specimens for the botanical lab to look over."

They rode forth; the girls thrilled, the young men pleased and excited, and all of them just a little bit disappointed at finding themselves passed by motor cars which whizzed by them as all Fredericksburg went to look at the improbable forest ahead.

There were cars by hundreds where the road abruptly ended. A crowd stared at the forest. Giant trees, their roots fixed firmly in the ground. Undergrowth here and there. Over it all, an aspect of peace and utter serenity—and permanence. The watching crowd hummed and buzzed with speculation, with talk. The thing they saw was impossible. It could not have happened. This forest could not possibly be real. They were regarding some sort of mirage.

But as the party of riders arrived, half a dozen men came out of the forest. They had dared to enter it. Now they returned, still incredulous of their own experience, bearing leaves and branches and one of them certain small berries unknown on the Atlantic coast.

A State police officer held up his

hand as Professor Minott's party went toward the edge of the forest.

"Look here!" he said. "We've been hearin' funny noises in there. I'm stoppin' anybody else from goin' in until we know what's what."

Professor Minott nodded. "We'll be careful. I'm Professor Minott of Robinson College. We're going in after some botanical specimens. I have a revolver. We're all right."

He rode ahead. The State policeman, without definite orders for authority, shrugged his shoulders and bent his efforts to the prevention of other attempts to explore. In minutes, the eight horses and their riders were out of sight.

THAT WAS now three hours past. For three hours, Professor Minott had led his charges a little south of northeast. In that time they saw no dangerous animals. They saw some—many—familiar plants. They saw rabbits in quantity, and once a slinking gray form which Tom Hunter, who was majoring in zoölogy, declared was a wolf. There are no wolves in the vicinity of Fredericksburg, but neither are there sequoias. And the party had seen no signs of human life, though Fredericksburg lies in farming country which is thickly settled.

In three hours the horses must have covered between twelve and fifteen miles, even through the timber. It was just after sighting a shaggy beast which was unquestionably a woodland buffalo—extinct east of the Rockies as early as 1820—that young Blake protested uneasily against further travel.

"There's something awfully queer, sir," he said awkwardly. "I don't mind experimenting as much as you like, sir, but we've got the girls with us. If we don't start back

pretty soon, we'll get in trouble with the dean."

And then Minott drew his two revolvers and very calmly announced that none of them would ever go back. That he knew what had happened and what could be expected. And he added that he would explain as soon as they were convinced he would use his revolvers in case of a mutiny.

"Call us convinced now, sir," said Blake.

He was a bit pale about the lips, but he hadn't flinched. In fact, he'd moved to be between Maida Haynes and the gun muzzle.

"We'd like very much to know how all these trees and plants, which ought to be three thousand miles away, happen to be growing in Virginia without any warning. Especially, sir, we'd like to know how it is that the topography underneath all this brand-new forest is the same. The hills trend the same way they used to, but everything that ever was on them has vanished, and something else is in its place."

Minott nodded approvingly. "Splendid, Blake!" he said warmly. "Sound observation! I picked you because you're well spoken of in geology, even though there were—er—other reasons for leaving you behind. Let's go on over the next rise. Unless I'm mistaken, we should find the Potomac in view. Then I'll answer any questions you like. I'm afraid we've a good bit more of riding to do to-day."

Reluctantly, the eight horses breasted the slope. They scrambled among underbrush. It was queer that in three hours they had seen not a trace of a road leading anywhere. But up at the top of the hill there was a road. It was a narrow, wandering cart track. Without a word, every one of the eight riders turned

their horses to follow it. It meandered onward for perhaps a quarter of a mile. It dipped suddenly. And the Potomac lay before and below them.

Then seven of the eight riders exclaimed. There was a settlement upon the banks of the river. There were boats in harbor. There were other boats in view beyond, two beating down from the long reaches upstream, and three others coming painfully up from the direction of Chesapeake Bay. But neither the village nor the boats should have been upon the Potomac River.

The village was small and mud-walled. Tiny, blue-clad figures moved about the fields outside. The buildings, the curving lines of the roofs, and more especially the unmistakable outline of a sort of temple near the center of the fortified hamlet—these were Chinese. The boats in sight were junks, save that their sails were cloth instead of slatted bamboo. The fields outside the squat mud walls were cultivated in a fashion altogether alien. Near the river, where marsh flats would be normal along the Potomac, rice fields intensely worked spread out instead.

Then a figure appeared near by. Wide hat, wadded cotton-padded jacket, cotton trousers, and clogs—it was Chinese peasant incarnate, and all the more so when it turned a slant-eyed, terror-stricken face upon them and fled squawking. It left a monstrously heavy wooden yoke behind, from which dangled two buckets filled with berries it had gathered in the forest.

The riders stared. There was the Potomac. But a Chinese village nestled beside it, Chinese junks plied its waters.

"I—I think," said Maida Haynes

unsteadily, "I—think I've—gone insane. Haven't I?"

Professor Minott shrugged. He looked disappointed but queerly resolute.

"No," he said shortly. "You're not mad. It just happens that the Chinese happened to colonize America first. It's been known that Chinese junks touched the American shore—the Pacific coast, of course—long before Columbus. Evidently they colonized it. They may have come all the way overland to the Atlantic, or maybe around by Panama. In any case, this is a Chinese continent now. This isn't what we want. We'll ride some more."

The fleeing, squawking figure had been seen from the village. A huge, discordant gong began to sound. Figures fled toward the walls from the fields round about. The popping of firecrackers began, with a chorus of most intimidating yells.

"Come on!" said Minott sharply. "We'd better move!"

He wheeled his horse about and started off at a canter. By instinct, since he was the only one who seemed to have any definite idea what to do, the others flung after him.

And as they rode, suddenly the horses staggered. The humans on them felt a queer, queasy vertigo. It lasted only for a second, but Minott paled a little.

"Now we'll see what's happened," he said composedly. "The odds are still fair, but I'd rather have had things stay as they were until we'd tried a few more places."

IV.

THAT SAME queasy vertigo affected the staring crowd at the end of the road leading north from Fredericksburg. For perhaps a second they felt an unearthly illness, which

even blurred their vision. Then they saw clearly again. And in an instant they were babbling in panic, starting their motor cars in terror, some of them fleeing on foot.

The sequoia forest had vanished. In its place was a dreary waste of glittering white; stumpy trees buried under snow; rolling ground covered with a powdery, glittering stuff.

In minutes dense fog shut off the view, as the warm air of a Virginia June morning was chilled by that frigid coating. But in minutes, too, the heavy snow began to melt. The cars fled away along the concrete road, and behind them an expanding belt of fog spread out—and the little streams and runlets filled with a sudden surplus of water, and ran more swiftly, and rose.

The eight riders were every one very pale. Even Minott seemed shaken but no less resolute when he drew rein.

"I imagine you will all be satisfied now," he said composedly. "Blake, you're the geologist of the party. Doesn't the shore line there look familiar?"

Blake nodded. He was very white indeed. He pointed to the stream.

"Yes. The falls, too. This is the site of Fredericksburg, sir, where we were this morning. There is where the main bridge was—or will be. The main highway to Richmond should run"—he licked his lips—"it should run where that very big oak tree is standing. The Princess Anne Hotel should be on the side of that hill. I—I would say, sir, that somehow we've gone back in time or else forward into the future. It sounds insane, but I've been trying to figure it out—"

Minott nodded coolly. "Very good! This is the site of Fredericksburg, to be sure. But we have not

traveled forward or back in time. I hope that you noticed where we came out of the sequoia forest. There seems to be a sort of fault along that line, which it may be useful to remember." He paused. "We're not in the past or the future, Blake. We've traveled sidewise, in a sort of oscillation from one time path to another. We happen to be in a—well, in a part of time where Fredericksburg has never been built, just as a little while since we were where the Chinese occupy the American continent. I think we'd better have lunch."

He dismounted. The four girls tended to huddle together. Lucy Blair's teeth chattered.

Blake moved to their horses' heads. "Don't get rattled," he said urgently. "We're here, wherever it is. Professor Minott is going to explain things in a minute. Since he knows what's what, we're in no danger. Climb off your horses and let's eat. I'm hungry as a bear. Come on, Maida!"

Maida Haynes dismounted. She managed a rather shaky smile. "I'm—afraid of—him," she said in a whisper. "More than—anything else. Stay close to me, please!"

Blake frowned.

Minott said dryly: "Look in your saddlebags and you'll find sandwiches. Also you'll find firearms. You young men had better arm yourselves. Since there's now no conceivable hope of getting back to the world we know, I think you can be trusted with weapons."

Blake stared at him, then silently investigated his own saddlebags. He found two revolvers, with what seemed an abnormally large supply of cartridges. He found a mass of paper, which turned out to be books with their cardboard backs torn off. He glanced professionally at the re-

volvers and slipped them in his pockets. He put back the books.

"I appoint you second in command, Blake," said Minott, more dryly than before. "You understand nothing, but you wait to understand. I made no mistake in choosing you despite my reasons for leaving you behind. Sit down and I'll tell you what happened."

WITH a grunt and a puffing noise, a small black bear broke cover and fled across a place where only that morning a highly elaborate filling station had stood. The party started, then relaxed. The girls suddenly started to giggle foolishly, almost hysterically. Minott bit calmly into a sandwich and said pleasantly:

"I shall have to talk mathematics to you, but I'll try to make it more palatable than my classroom lectures have been. You see, everything that has happened can only be explained in terms of mathematics, and more especially certain concepts in mathematical physics. You young ladies and gentlemen being college men and women, I shall have to phrase things very simply, as for ten-year-old children. Hunter, you're staring. If you actually see something, such as an Indian, shoot at him and he'll run away. The probabilities are that he never heard the report of a firearm. We're not on the Chinese continent now."

Hunter gasped, and fumbled at his saddlebags. While he got out the revolvers, Minott went on imper turbably:

"There has been an upheaval of nature, which still continues. But instead of a shaking and jumbling of earth and rocks, there has been a shaking and jumbling of space and time. I go back to first principles.

Time is a dimension. The past is one extension of it, the future is the other, just as east is one extension of a more familiar dimension and west is its opposite.

"But we ordinarily think of time as a line, a sort of tunnel, perhaps. We do not make that error in the dimensions about which we think daily. For example, we know that Annapolis, King George courthouse, and—say—Norfolk are all to the eastward of us. But we know that in order to reach any of them, as a destination, we would have to go not only east but north or south in addition. In imaginative travels into the future, however, we never think in such a common-sense fashion. We assume that the future is a line instead of a coördinate, a path instead of a direction. We assume that if we travel to futureward there is but one possible destination. And that is as absurd as it would be to ignore the possibility of traveling to eastward in any other line than due east, forgetting that there is northeast and southeast and a large number of intermediate points."

Young Blake said slowly: "I follow you, sir, but it doesn't seem to bear——"

"On our problem? But it does!" Minott smiled, showing his teeth. He bit into his sandwich again. "Imagine that I come to a fork in a road. I flip a coin to determine which fork I shall take. Whichever route I follow, I shall encounter certain landmarks and certain adventures. But they will not be the same, whether landmarks or adventures.

"In choosing between the forks of the road I choose not only between two sets of landmarks I could encounter, but between two sets of events. I choose between paths, not only on the surface of the earth, but in time. And as those paths upon

earth may lead to two different cities, so those paths in the future may lead to two entirely different fates. On one of them may lie opportunities for riches. On the other may lie the most prosaic of hit-and-run accidents which will leave me a mangled corpse, not only upon one fork of a highway in the State of Virginia, but upon one fork of a highway in time.

"In short, I am pointing out that there is more than one future we can encounter, and with more or less absence of deliberation we choose among them. But the futures we fail to encounter, upon the roads we do not take, are just as real as the landmarks upon those roads. We never see them, but we freely admit their existence."

Again it was Blake who protested: "All this is interesting enough, sir, but still I don't see how it applies to our present situation."

Minott said impatiently: "Don't you see that if such a state of things exists in the future, that it must also have existed in the past? We talk of three dimensions and one present and one future. There is a theoretic necessity—a mathematical necessity—for assuming more than one future. There are an indefinite number of possible futures, any one of which we would encounter if we took the proper 'forks' in time.

"There are any number of destinations to eastward. There are any number to futureward. Start a hundred miles west and come eastward, choosing your paths on earth at random, as you do in time. You may arrive here. You may arrive to the north or south of this spot, and still be east of your starting point. Now start a hundred years back instead of a hundred miles west."

Groping, Blake said fumblingly: "I think you're saying, sir, that—"

well, as there must be any number of futures, there must have been any number of pasts besides those written down in our histories. And—and it would follow that there are any number of what you might call 'presents.' ”

Minott gulped down the last of his sandwich and nodded. “Precisely. And to-day’s convulsion of nature has jumbled them and still upsets them from time to time. The Northmen once colonized America. In the sequence of events which mark the pathway of our own ancestors through time, that colony failed. But along another path through time that colony thrive and flourished. The Chinese reached the shores of California. In the path our ancestors followed through time, nothing developed from the fact. But this morning we touched upon the pathway in which they colonized and conquered the continent, though from the fear that one peasant we saw displayed, they have not wiped out the Indians.

“Somewhere the Roman Empire still exists, and may not improbably rule America as it once ruled Britain. Somewhere, not impossibly, the conditions causing the glacial period still obtain and Virginia is buried under a mass of snow. Somewhere even the Carboniferous period may exist. Or to come more closely to the present we know, somewhere there is a path through time in which Pickett’s charge at Gettysburg went desperately home, and the Confederate States of America is now an independent nation with a heavily fortified border and a chip-on-the-shoulder attitude toward the United States.”

BLAKE alone had asked questions, but the entire party had been listening open-mouthed.

Now Maida Haynes said: “But—Professor Minott, where are we now?”

“We are probably,” said Minott, smiling, “in a path of time in which America has never been discovered by white men. That isn’t a very satisfactory state of things. We’re going to look for something better. We wouldn’t be comfortable in wigwams, with skins for clothing. So we shall hunt for a more congenial environment. We will have some weeks in which to do our searching, I think. Unless, of course, all space and time are wiped out by the cause of our predicament.”

Tom Hunter stirred uncomfortably. “We haven’t traveled backward or forward in time, then?”

“No,” repeated Minott. He got to his feet. “That odd nausea we felt seems to be caused by travel sideways in time. It’s the symptom of a time oscillation. We’ll ride on and see what other worlds await us. We’re a rather well-qualified party for this sort of exploration. I chose you for your trainings. Hunter, zoölogy. Blake, engineering and geology. Harris”—he nodded to the rather undersized young man, who flushed at being noticed—“Harris is quite a competent chemist, I understand. Miss Ketterling is a capable botanist. Miss Blair——”

Maida Haynes rose slowly. “You anticipated all this, Professor Minott, and yet you brought us into it. You—you said we’ll never get back home. Yet you deliberately arranged it. What—what was your motive? What did you do it for?”

Minott climbed into the saddle. He smiled, but there was bitterness in his smile. “In the world we know,” he told her, “I was a professor of mathematics in a small and unconsidered college. I had abso-

lutely no chance of ever being more than a professor of mathematics in a small and unconsidered college. In this world I am, at least, the leader of a group of reasonably intelligent young people. In our saddlebags are arms and ammunition and—more important—books of reference for our future activities. We shall hunt for and find a world in which our technical knowledge is at a premium. We shall live in that world—if all time and space is not destroyed—and use our knowledge.”

Maida Haynes said: “But again—what for?”

“To conquer it!” said Minott in sudden fierceness. “To conquer it! We eight shall rule a world as no world has been ruled since time began! I promise you that when we find the environment I seek, you will have wealth by millions, slaves by thousands, every luxury, and all the power human beings could desire!”

Blake said evenly: “And you, sir? What will you have?”

“Most power of all,” said Minott steadily. “I shall be the emperor of the world! And also”—his tone changed indescribably as he glanced at Maida—“also I shall have a certain other possession that I wish.”

He turned his back to them and rode off to lead the way. Maida Haynes was deathly pale as she rode close to Blake. Her hand closed convulsively upon his arm.

“Jerry!” she whispered. “I’m—frightened!”

And Blake said steadily: “Don’t worry! I’ll kill him first!”

V.

THE FERRYBOAT from Berkeley plowed valorously through the fog. Its whistle howled mournfully at the regulation intervals.

Up in the pilot house, the skipper said confidentially: “I tell you, I

had the funniest feelin’ of my life, just now. I was dizzy an’ sick all over, like I was seasick an’ drunk all at the same time.”

The mate said abstractedly: “I had somethin’ like that a little while ago. Somethin’ we ate, prob’ly. Say, that’s funny!”

“What?”

“Was a lot o’ traffic in the harbor just now, whistlin’. I ain’t heard a whistle for minutes. Listen!”

Both men strained their ears. There was the rhythmic shudder of the vessel, itself a sound produced by the engines. There were fragmentary voice noises from the passenger deck below. There was the wash of water by the ferryboat’s bow. There was nothing else. Nothing at all.

“Funny!” said the skipper.

“Damn funny!” agreed the mate.

The ferryboat went on. The fog cut down all visibility to a radius of perhaps two hundred feet.

“Funniest thing I ever saw!” said the skipper worriedly. He reached for the whistle cord and the mournful bellow of the horn resounded. “We’re near our slip, though. I wish——”

With a little chugging, swishing sound a steam launch came out of the mist. It sheered off, the men in it staring blankly at the huge bulk of the ferry. It made a complete circuit of the big, clumsy craft. Then some one stood up and bellowed unintelligibly in the launch. He bellowed again. He was giving an order. He pointed to the flag at the stern of the launch—it was an unfamiliar flag—and roared furiously.

“What the hell’s the matter of that guy?” wondered the mate.

A little breeze blew suddenly. The fog began to thin. The faintly brighter spot which was the sun overhead grew bright indeed. Faint

sunshine struggled through the fog bank. The wind drove the fog back before it, and the bellowing man in the steam launch grew purple with rage as his orders went unheeded.

Then, quite abruptly, the last wisps of vapor blew away. San Francisco stood revealed. But—San Francisco? This was not San Francisco! It was a wooden city, a small city, a dirty city with narrow streets and gas street lamps and four monstrous, barracklike edifices fronting the harbor. Nob Hill stood, but it was barren of dwellings. And—

"Damn!" said the mate of the ferryboat.

He was staring at a colossal mass of masonry, foursquare and huge, which rose to a gigantic spiral-fluted dome. A strange and alien flag fluttered in the breeze above certain buildings. Figures moved in the streets. There were motor cars, but they were clumsy and huge.

The mate's eyes rested upon a horse-drawn carriage. It was drawn by three horses abreast, and they were either so trained or so check-reined that the two outer horses' heads were arched outward in the fashion of Tsarist Russia.

But that was natural enough. When an interpreter could be found, the mate and skipper were savagely abused for entering the harbor of Novo Skevsky without paying due heed to the ordinances in force by the ukase of the Tsar Alexis of all the Russias. These rules, they learned, were enforced with special rigor in all the Russian territory in America, from Alaska on south.

THE BOY ran shouting up to the village. "Hey, grandpa! Hey, grandpa! Lookit the birds!" He pointed as he ran.

A man looked idly, and stood transfixed. A woman stopped, and

stared. Lake Superior glowed blue off to westward, and the little village most often turned its eyes in that direction. Now, though, as the small boy ran shouting of what he had seen, men stared, women marveled, and children ran and shouted and whooped in the instinctive excitement of childhood at anything which entrances grown-ups.

Over the straggly pine forests birds were coming. They came in great dark masses. Not by dozens, or by hundreds, or even by thousands. They came in millions, in huge dark clouds which obscured the sky. There were two huge flights in sight at the boy's first shouting. There were six in view before he had reached his home and was panting a demand that his elders come and look. And there were others, incredible numbers of others, sweeping onward straight over the village.

Dusk fell abruptly as the first flock passed overhead. The whirring of wings was loud. It made people raise their voices as they asked each other what such birds could possibly be. Daylight again, and again darkness as the flocks poured on. The size of each flock was to be measured not in feet or yards, but in miles of front. Two, three miles of birds, flying steadily in a single enormous mass some four miles deep. Another such mass, and another, and another.

"What are they, grandpa? There must be millions of 'em!"

Somewhere, a shotgun went off. Small things dropped from the sky. Another gunshot, and another. A rain of bird shot went up from the village into the mass of whirring wings. And crazily careening small bodies fell down among the houses.

Grandpa examined one of them, smoothing its rumpled plumage. He

exclaimed. He gasped in excitement. "It's a wild pigeon! What they used to call passenger pigeons! Back in '78 there was these birds by billions. Folks said a billion was killed in Michigan that one year! But they're gone now. They're gone like the buffalo. There ain't any more."

The sky was dark with birds above him. A flock four miles wide and three miles long made lights necessary in the village. The air was filled with the sound of wings. The passenger pigeon had returned to a continent from which it had been absent for almost fifty years.

Flocks of passenger pigeons flew overhead in thick, dark masses equaling those seen by Audubon in 1813, when he computed the pigeons in flight above Kentucky at hundreds of billions in number. In flocks that were innumerable they flew to westward. The sun set, and still the air was filled with the sound of their flying. For hours after darkness fell, the whirring of wings continued without ceasing.

VI.

A GREAT open fire licked at the rocks against which it had been built. The horses cropped uneasily at herbage near by. The smell of fat meat cooking was undeniably savory, but one of the girls blubbered gustily on a bed of leaves. Harris tended the cookery. Tom Hunter brought wood. Blake stood guard a little beyond the firelight, revolvers ready, staring off into the blackness. Professor Minott pored over a topographical map of Virginia. Maida Haynes tried to comfort the blubbering girl.

"Supper's ready," said Harris. He made even that announcement seem somehow shy and apologetic.

Minott put down his map. Tom

Hunter began to cut great chunks of steaming meat from the haunch of venison. He put them on slabs of bark and began to pass them around. Minott reached out his hand and took one of them. He ate with obvious appetite. He seemed to have abandoned his preoccupation the instant he laid down his map. He was displaying the qualities of a capable leader.

"Hunter," he observed, "after you've eaten that stuff, you might relieve Blake. We'll arrange reliefs for the rest of the night. By the way, you men mustn't forget to wind your watches. We'll need to rate them, ultimately."

Hunter gulped down his food and moved out to Blake's hiding place. They exchanged low-toned words. Blake came back to the fire. He took the food Harris handed him and began to eat it. He looked at the blubbering girl on the bed of leaves.

"She's just scared," said Minott. "Barely slit the skin on her arm. But it is upsetting for a senior at Robinson College to be wounded by a flint arrowhead."

Blake nodded. "I heard some noises off in the darkness," he said curtly. "I'm not sure, but my impression was that I was being stalked. And I thought I heard a human voice."

"We may be watched," admitted Minott. "But we're out of the path of time in which those Indians tried to ambush us. If any of them follow, they're too bewildered to be very dangerous."

"I hope so," said Blake.

His manner was devoid of cordiality, yet there was no exception to be taken to it. Professor Minott had deliberately got the party into a predicament from which there seemed to be no possibility of es-

cape. He had organized it to get it into just that predicament. He was unquestionably the leader of the party, despite his action. Blake made no attempt to undermine his leadership.

But Blake himself had some qualifications as a leader, young as he was. Perhaps the most promising of them was the fact that he made no attempt to exercise his talents until he knew as much as Minott of what was to be looked for, what was to be expected.

He listened sharply and then said: "I think we've digested your lesson of this morning, sir. But how long is this scrambling of space and time to continue? We left Fredericksburg and rode to the Potomac. It was Chinese territory. We rode back to Fredericksburg, and it wasn't there. Instead, we encountered Indians who let loose a flight of arrows at us and wounded Bertha Ketterling in the arm. We were nearly out of range at the time, though."

"They were scared," said Minott. "They'd never seen horses before. Our white skins probably upset them, too. And then our guns, and the fact that I killed one, should have chased them off."

"But—what happened to Fredericksburg? We rode away from it. Why couldn't we ride back?"

"The scrambling process has kept up," said Minott dryly. "You remember that queer vertigo? We've had it several times to-day, and every time, as I see it, there's been an oscillation of the earth we happened to be on. Hm! Look!"

He got up and secured the map over which he had been poring. He brought it back and pointed to a heavy penciled line. "Here's a map of Virginia in our time. The Chinese continent appeared just about

three miles north of Fredericksburg. The line of demarcation was, I consider, the line along which the giant sequoias appeared. While in the Chinese time we felt that giddiness and rode back toward Fredericksburg. We came out of the sequoia forest at the same spot as before. I made sure of it. But the continent of our time was no longer there.

"We rode east and—whether you noticed it or not—before we reached the border of King George County there was another abrupt change in the vegetation—from a pine country to oaks and firs, which are not exactly characteristic of this part of the world in our time. We saw no signs of any civilization. We turned south, and ran into that heavy fog and the snow beyond it. Evidently, there's a section of a time path in which Virginia is still subject to a glacial climate."

Blake nodded. He listened again. Then he said:

"You've three sides of an—an island of time marked there."

"Just so," agreed Minott. "Exactly! In the scrambling process, the oscillating process, there seem to be natural 'faults' in the surface of the earth. Relatively large areas seem to shift back and forth as units from one time path to another. In my own mind, I've likened them to elevators with many stories.

"We were on the Fredericksburg 'elevator,' or that section of our time path, when it shifted to another time. We rode off it onto the Chinese continent. While there, the section we started from shifted again, to another time altogether. When we rode back to where it had been—well, the town of Fredericksburg was in another time path altogether."

Blake said sharply: "Listen!"

A dull mutter sounded far to the

north. It lasted for an instant and died away. There was a crashing of bushes near by and a monstrous animal stepped alertly into the firelight. It was an elk, but such an elk! It was a giant, a colossal creature. One of the girls cried out afrightedly, and it turned and crashed away into the underbrush.

"There are no elk in Virginia," said Minott dryly.

Blake said sharply again: "Listen!"

AGAIN that dull muttering to the north. It grew louder, now. It was an airplane motor. It increased in volume from a dull mutter to a growl, from a growl to a roar. Then the plane shot overhead, the navigation lights on its wings glowing brightly. It banked steeply and returned. It circled overhead, with a queer effect of helplessness. And then suddenly it dived down.

"An aviator from our time," said Blake, staring toward the sound. "He saw our fire. He's going to try to make a crash landing in the dark."

The motor cut off. An instant in which there was only the crackling of the fire and the whistling of wind around gliding surfaces off there in the night. Then a terrific thrashing of branches. A crash—

Then a flare of flame, a roaring noise, and the lurid yellow of gasoline flames spouting skyward.

"Stay here!" snapped Blake. He was on his feet in an instant. "Harris, Professor Minott! Somebody has to stay with the girls! I'll get Hunter and go help!"

He plunged off into the darkness, calling to Hunter. The two of them forced their way through the underbrush. Minott scowled and got out his revolvers. Still scowling, he slipped out of the firelight and took

up the guard duty Hunter had abandoned.

A gasoline tank exploded, off there in the darkness. The glare of the fire grew intolerably vivid. The sound of the two young men racing through undergrowth became fainter and died away.

A long time passed—a very long time. Then, very far away, the sound of thrashing bushes could be heard again. The gasoline flare dulled and dimmed. Figures came slowly back. They moved as if they were carrying something very heavy. They stopped beyond the glow of light from the camp fire. Then Blake and Hunter reappeared, alone.

"He's dead," said Blake curtly. "Luckily, he was flung clear of the crash before the gas tanks caught. He came back to consciousness for a couple of minutes before he—died. Our fire was the only sign of human life he'd seen in hours. We brought him over here. We'll bury him in the morning."

There was silence. Minott's scowl was deep and savage as he came back to the firelight.

"What—what did he say?" asked Maida Haynes.

"He left Washington at five this afternoon," said Blake shortly. "By our time, or something like it. All of Virginia across the Potomac vanished at four thirty, and virgin forest took its place. He went out to explore. At the end of an hour he came back, and Washington was gone. In its place was a fog bank, with snow underneath. He followed the Potomac down and saw palisaded homesteads with long, oared ships drawn up on shore."

"Vikings, Norsemen!" said Minott in satisfaction.

"He didn't land. He swept on down, following the edge of the bay. He looked for Baltimore. Gone!

Once, he's sure, he saw a city, but he was taken sick at about that time and when he recovered, it had vanished. He was heading north again and his gasoline was getting low when he saw our fire. He tried for a crash landing. He'd no flares with him. He crashed—and died."

"Poor fellow!" said Maida shakenly.

"The point is," said Blake, "that Washington was in our present time at about four thirty to-day. We've got a chance, though a slim one, of getting back! We've got to get to the edge of one of these blocks that go swinging through time, the edge of what Professor Minott calls a 'time fault,' and watch it! When the shifts come, we explore as quickly as we can. We've no great likelihood, perhaps, of getting back exactly to our own period, but we can get nearer to it than we are now! Professor Minott said that somewhere the Confederacy exists. Even that, among people of our own race and speaking our own language, would be better than to be marooned forever among Indians, or among Chinese or Norsemen."

Minott said harshly: "Blake, we'd better have this out right now! I give the orders in this party! You jumped quickly when that plane crashed, and you gave orders to Harris and to me. I let you get away with it, but we can have but one leader. I am that leader! See you remember it!"

Blake swung about. Minott had a revolver bearing on his body.

"And you are making plans for a return to our time!" he went on savagely. "I won't have it! The odds are still that we'll all be killed. But if I do live, I mean to take advantage of it. And my plans do not include a return to a professorship of mathematics at Robinson College."

"Well?" said Blake coolly. "What of it, sir?"

"Just this! I'm going to take your revolvers. I'm going to make the plans and give the orders hereafter. We are going to look for the time path in which a viking civilization thrives in America. We'll find it, too, because these disturbances will last for weeks yet. And once we find it, we will settle down among those Norsemen, and when space and time are stable again I shall begin the formation of my empire! And you will obey orders or you'll be left afoot while the rest of us go on to my destiny!"

Blake said very quietly indeed: "Perhaps, sir, we'd all prefer to be left to our own destinies rather than be merely the tools by which you attain to yours."

Minott stared at him an instant. His lips tensed. "It is a pity," he said coldly. "I could have used your brains, Blake. But I can't have mutiny. I shall have to shoot you."

His revolver came up remorselessly.

VII.

TO DETERMINE the cause of various untoward events, the British Academy of Sciences was in extraordinary session. Its members were weary, bleary-eyed, but still conscious of their dignity and the importance of their task. A venerable, whiskered physicist spoke with fitting definiteness and solemnity.

"And so, gentleman, I see nothing more that remains to be said. The extraordinary events of the past hours seem to follow from certain facts about our own closed space. The gravitational fields of 10.79 particles of matter will close space about such an aggregation. No cosmos can be larger. No cosmos can be smaller. And if we envision the

creation of such a cosmos we will observe its galaxies vanish at the instant the 10.79th particle adds its own mass to those which were present before it.

"However, the fact that space has closed about such a cosmos does not imply its annihilation. It means merely its separation from its original space, the isolation of itself in space and time because of the curvature of space due to its gravitational field. And if we assume the existence of more than one area of closed space, we assume in some sense the existence of a hyper-space separating the closed spaces; hyper-spatial coördinates which mark their relative hyper-spatial positions; hyper-spatial——"

A gentleman with even longer and whiter whiskers than the speaker said in a loud and decided voice: "Fiddlesticks! Stuff and nonsense!"

The speaker paused. He glared. "Sir! Do you refer——"

"I do!" said the gentleman with the longer and whiter whiskers. "It is stuff and nonsense! Next you'd be saying that in this hyper-space of yours the closed spaces would be subject to hyper-laws, revolve about each other in hyper-orbits regulated by hyper-gravitation, and undoubtedly at times there would be hyper-earth tides or hyper-collisions, producing decidedly hyper-catastrophes."

"Such, sir," said the whiskered gentleman on the rostrum, quivering with indignation, "such is the fact, sir!"

"Then the fact," rejoined the scientist with the longer and whiter whiskers, "sir, makes me sick!"

And as if to prove it, he reeled. But he was not alone in reeling. The entire venerable assembly shuddered in abrupt, nauseating vertigo. And then the British Academy of

Sciences adjourned without formality and in a panic. It ran away. Because abruptly there was no longer a rostrum nor an end to its assembly hall. Where their speaker had been was open air. In the open air was a fire. About the fire were certain brutish figures incredibly resembling the whiskered scientists who fled from them. They roared at the fleeing, venerable men. Snarling, wielding crude clubs, they plunged into the hall of the British Academy of Sciences. It is known that they caught one person—a biologist of highly eccentric views. It is believed that they ate him.

But it has long been surmised that some, at least, of the extinct species of humanity, such as the Piltdown and Neanderthal men, were cannibals. If in some pathway of time they happened to exterminate their more intelligent rivals—if somewhere *pithecanthropus erectus* survives and *homo sapiens* does not—well, in that pathway of time cannibalism is the custom of society.

VIII.

WITH A GASP, Maida Haynes flung herself before Blake. But Harris was even quicker. Apologetic and shy, he had just finished cutting a smoking piece of meat from the venison haunch. He threw it swiftly, and the searing mass of stuff flung Minott's hand aside at the same instant that it burned it horribly.

Blake was on his feet, his gun out. "If you pick up that gun, sir," he said rather breathlessly but with unquestionable sincerity, "I'll put a bullet through your arm!"

Minott swore. He retrieved the weapon with his left hand and thrust it in his pocket. "You young fool!" he snapped. "I'd no intention of

shooting you. I did intend to scare you thoroughly. Harris, you're an ass! Maida, I shall discuss your action later. The worst punishment I could give the lot of you would be to leave you to yourselves."

He stalked out of the firelight and off into the darkness. Something like consternation came upon the group. The glow of fire where the plane had crashed flickered fitfully. The base of the dull red light seemed to widen a little.

"That's the devil!" said Hunter uneasily. "He does know more about this stuff than we do. If he leaves us, we're messed up!"

"We are," agreed Blake grimly. "And perhaps if he doesn't."

Lucy Blair said: "I—I'll go and talk to him. He—he used to be nice to me in class. And—and his hand must hurt terribly. It's burned."

She moved away from the fire, a long and angular shadow going on before her.

Minott's voice came sharply: "Go back! There's something moving out here!"

Instantly after, his revolver flashed. A howl arose, and the weapon flashed again and again. Then there were many crashings. Figures fled.

Minott came back to the firelight, scornfully. "Your leadership is at fault, Blake," he commented sardonically. "You forgot about a guard. And you were the man who thought he heard voices! They've run away now, though. Indians, of course."

Lucy Blair said hesitantly: "Could I—could I do something for your hand? It's burned——"

"What can you do?" he asked angrily.

"There's some fat," she told him. "Indians used to dress wounds with bear fat. I suppose deer fat would do as well."

He permitted her to dress the burn, though it was far from a serious one. She begged handkerchiefs from the others to complete the job. There was distinct uneasiness all about the camp fire. This was no party of adventurers, prepared for anything. It had started as an outing of undergraduates.

Minott scowled as Lucy Blair worked on his hand. Harris looked as apologetic as possible, because he had made the injury. Bertha Ketterling blubbered—less noisily, now, because nobody paid her any attention. Blake frowned meditatively at the fire. Maida Haynes tried uneasily not to seem conscious of the fact that she was in some sense—though no mention had been made of it—a bone of contention.

The horses moved uneasily. Bertha Ketterling sneezed. Maida felt her eyes smarting. She was the first one to see the spread of the blaze started by the gas tanks of the airplane. Her cry of alarm roused the others.

The plane had crashed a good mile from the camp fire. The blazing of its tanks had been fierce but brief. The burning of the wings and chassis fabric had been short, as well. The fire had died down to seeming dull embers. But there were more than embers ablaze out there now.

The fire had died down, to be sure, but only that it might spread among thick and tangled underbrush. It had spread widely on the ground before some climbing vine, blazing, carried flames up to resinous pine branches overhead. A small but steady wind was blowing. And as Maida looked off to see the source of the smoke which stung her eyes, one tall tree was blazing, a long line of angry red flames crept along the ground, and then at two more, three

more, then at a dozen points bright fire roared upward toward the sky.

The horses snorted and reared.

Minott snapped: "Harris! Get the horses! Hunter, see that the girls get mounted, and quickly!"

He pointedly gave Blake no orders. He pored intently over his map as more trees and still more caught fire and blazed upward. He stuffed it in his pocket. Blake calmly rescued the haunch of venison, and when Minott sprang into the saddle among the snorting, scared horses, Blake was already by Maida Haynes' side, ready to go.

"We ride in pairs," said Minott curtly. "A man and a girl. You men, look after them. I've a flashlight. I'll go ahead. We'll hit the Rappahannock River sooner or later, if we don't get around the fire first—and if we can keep ahead of it."

They topped a little hillock and saw more of the extent of their danger. In a half mile of spreading, the fire had gained three times as much breadth. And to their right the fire even then roared in among the trees of a forest so thick as to be jungle. The blaze fairly raced through it as if the fire made its own wind, which in fact it did. To their left it crackled fiercely in underbrush which, as they fled, blazed higher.

And then, as if to add mockery to their very real danger, a genuinely brisk breeze sprang up suddenly. Sparks and blazing bits of leaves, fragments of ash and small, unsubstantial coals began to fall among them. Bertha Ketterling yelped suddenly as a tiny live coal touched the flesh of her cheek. Harris' horse squealed and kicked as something singed it. They galloped madly ahead. Trees rose about them. The white beam of Minott's flashlight seemed almost ludicrous

in the fierce red glare from behind, but at least it showed the way.

IX.

SOMETHING large and dark and clumsy lumbered clumsily into the space between Grady's statue and the post-office building. The arc lights showed it clearly, and it was not anything which should be wandering in the streets of Atlanta, Georgia, at any hour of the day or night. A taxicab chauffeur saw it and nearly tore off a wheel in turning around to get away. A policeman saw it, and turned very pale as he grabbed at his beat telephone to report it. But there had been too many queer things happening this day for him to suspect his own sanity, and the *Journal* had printed too much news from elsewhere for him to disbelieve his own eyes.

The thing was monstrous, reptilian, loathesome. It was eighty feet long, of which at least fifty was head and tail and the rest flabby-fleshed body. It may have weighed twenty-five or thirty tons, but its head was not much larger than that of a large horse. That tiny head swung about stupidly. The thing was bewildered. It put down a colossal foot, and water gushed up from a broken water main beneath the pavement. The thing did not notice. It moved vaguely, exhaling a dank and musty odor.

The clang of police-emergency cars and the scream of fire-engine sirens filled the air. An ambulance flashed into view—and was struck by a balancing sweep of the mighty tail. The ambulance careened and crashed.

The thing uttered a plaintive cry, ignoring the damage its tail had caused. The sound was like that of a bleat, a thousand times multiplied. It peered ceaselessly around, seem-

ing to feel trapped by the tall buildings about it, but it was too stupid to retrace its steps for escape.

Somebody screamed in the distance as police cars and fire engines reached the spot where the first thing swayed and peered and moved in quest of escape. Two other things, smaller than the first, came lumbering after it. Like it, they had monstrous bodies and disproportionately tiny heads. One of them blundered stupidly into a hook-and-ladder truck. Truck and beast went down, and the beast bleated like the first.

Then some fool began to shoot. Other fools joined in. Steel-jacketed bullets poured into the mountains of reptilian flesh. Police sub-machine guns raked the monsters. Those guns were held by men of great daring, who could not help noting the utter stupidity of the things out of the great swamp which had appeared where Inman Park used to be.

The bullets stung. They hurt. The three beasts bleated and tried bewilderedly and very clumsily to escape. The largest tried to climb a five-story building, and brought it down in sheer wreckage.

Before the last of them was dead—or, rather, before it ceased to move its great limbs, because the tail moved jerkily for a long time and its heart was still beating spasmodically when loaded on a city dump cart next day—before the last of them was dead they had made sheer chaos of three blocks of business buildings in the heart of Atlanta, had killed seventeen men, and the best testimony is that they made not one attempt to fight. Their whole and only thought was to escape. The destruction they wrought and the deaths they caused were due to their clumsiness and stupidity.

X.

THE LEADING horses floundered horribly. They sank to their fetlocks in something soft and very spongy. Bertha Ketterling squawked in terror as her mount's motion changed.

Blake said crisply in the blackness: "It feels like plowed ground. Better use the light again, Professor Minott."

The sky behind them glowed redly. The forest fire still trailed them. For miles of front, now, it shot up sparks and flame and a harsh red glare which illumined the clouds of its own smoke.

The flashlight stabbed at the earth. The ground was plowed. It was softened by the hands of men. Minott kept the light on as little gasps of thankfulness arose.

Then he said sardonically: "Do you know what this crop is? It's lentils. Are lentils grown in Virginia? Perhaps! We'll see what sort of men these may happen to be."

He swung to follow the line of the furrows.

Tom Hunter said miserably: "If that's plowed ground, it's a damn shallow furrow. A one-horse plow'd throw up more dirt than that."

A light glowed palely in the distance. Every person in the party saw it at the same instant. As if by instinct, the head of every horse swerved for it.

"We'll want to be careful," said Blake quietly. "These may be Chinese, too."

The light was all of a mile distant. They moved over the plowed ground cautiously.

Suddenly the hoofs of Lucy Blair's horse rang on stone. The noise was startlingly loud. Other horses, following hers, clattered thunderously. Minott flashed down

the light again. Dressed stone. Cut stone. A roadway built of dressed-stone blocks, some six or eight feet wide. Then one of the horses shivered and snorted. It pranced agitatedly, edging away from something on the road. Minott swept the flashlight beam along the narrow way.

"The only race," he said dryly, "that ever built roads like this was the Romans. They made their military roads like this. But they didn't discover America that we know of."

The beam touched something dark. It came back and steadied. One of the girls uttered a stifled exclamation. The beam showed dead men. One was a man with a shield and sword and a helmet such as the soldiers of ancient Rome are pictured as having worn. He was dead. Half his head had been blown off. Lying on top of him there was a man in a curious gray uniform. He had died of a sword wound.

The beam searched around. More bodies. Many Roman-accoutered figures. Four or five men in what looked remarkably like the uniform that might be worn by soldiers of the Confederate Army—if a Confederate Army could be supposed to exist.

"There's been fighting," said Blake composedly. "I guess somebody from the Confederacy—that time path, say—started to explore what must have seemed a damned strange happening. And these Romans—if they are Romans—jumped them."

Something came shambling through the darkness. Minott threw the flash beam upon it. It was human, yes. But it was three parts naked, and it was chained, and it had been beaten horribly, and there were great sores upon its body from other beatings. It was bony and emaciated. The insensate fer-

ocity of sheer despair marked it. It was brutalized by its sufferings until it was just human, barely human, and nothing more.

It squinted at the light, too dull of comprehension to be afraid.

THEN Minott spoke, and at his words it groveled in the dirt. Minott spoke harshly, in half-forgotten Latin, and the groveling figure mumbled words which had been barbarous Latin to begin with, and through its bruised lips were still further mutilated.

"It's a slave," said Minott coldly. "Strange men—Confederates, I suppose—came from the north to-day. They fought and killed some of the guards at this estate. This slave denies it, but I imagine he was heading north in hopes of escaping to them. When you think of it, I suppose we're not the only explorers to be caught out of our own time path by some shift or another."

He growled at the slave and rode on, still headed for the distant light.

"What—what are you going to do?" asked Maida faintly.

"Go on to the villa yonder and ask questions," said Minott dryly. "If Confederates hold it, we'll be well received. If they don't, we'll still manage to earn a welcome. I intend to camp along a time fault and cross over whenever a time shift brings a Norse settlement in sight. Consequently, I want exact news of places where they've been seen, if such news is to be had."

Maida Haynes pressed close to Blake. He put a reassuring hand on her arm as the horses trudged on over the soft ground. The firelight behind them grew brighter. Occasional resinous, coniferous trees flared upward and threw fugitive red glows upon the riding figures. But gradually the glare grew

steadier and stronger. The white walls of a rambling stucco house became visible—outbuildings—barns. A monstrous structure which looked startlingly like a barracks.

It was a farm, an estate, a Roman villa transplanted to the very edge of a wilderness. It was—Blake remembered vaguely—like a picture he had once seen of a Roman villa in England, restored to look as it had been before Rome withdrew her legions from Britain and left the island to savagery and darkness. There were small mounds of curing hay about them, through which the horses picked their way. Blake suddenly wrinkled his nostrils suspiciously. He sniffed.

Maida pressed close to him. Her lips formed words. Lucy Blair rode close to Minott, glancing up at him from time to time. Harris rode beside Bertha Ketterling, and Bertha sat her horse as if she were saddle sore. Tom Hunter clung close to Minott as if for protection, leaving Janet Thompson to look out for herself.

"Jerry," said Maida, "what—what do you think?"

"I don't like it," admitted Blake in a low tone. "But we've got to tag along. I think I smell——"

Then a sudden swarm of figures leaped at the horses—wild figures, naked figures, sweaty and reeking and almost maniacal figures, some of whom clanked chains as they leaped. A voice bellowed orders at them from a distance, and a whip cracked ominously.

Before the struggle ended, there were just two shots fired. Blake fired them both and wheeled about. Then a horse streaked away, and Bertha Ketterling was bawling plaintively, and Tom Hunter babbled hysterically, and Harris swore

with a complete lack of his customary air of apology.

Minott seemed to be buried under a mass of foul bodies like the rest, but he rasped at his captors in an authoritative tone. They fell away from him, cringing as if by instinct. And then torches appeared suddenly and slaves appeared in their light—slaves of every possible degree of filth and degradation, of every possible racial mixture, but unanimous in a desperate abjectness before their master amid the torchbearers.

He was a short, fat man, in an only slightly modified toga. He drew it close about his body as the torchbearers held their flares close to the captives. The torchlight showed the captives, to be sure, but also it showed the puffy, self-indulgent and invincibly cruel features of the man who owned these slaves and the villa. By his pose and the orders he gave in a curiously corrupt Latin, he showed that he considered he owned the captives, too.

XI.

THE DEPUTY from Aisne-le-Sur decided that it had been very wise indeed for him to walk in the fresh air. Paris at night is stimulating. That curious attack of vertigo had come of too much champagne. The fresh air had dispelled the fumes. But it was odd that he did not know exactly where he was, though he knew his Paris well.

These streets were strange. The houses were unlike any that he remembered ever having seen before. In the light of the street lamps—and they were unusual, too—there was a certain unfamiliar quality about their architecture. He puzzled over it, trying to identify the peculiar *flair* these houses showed.

He became impatient. After all,

it was necessary for him to return home some time, even though his wife— The deputy from Aisne-le-Sur shrugged. Then he saw bright lights ahead. He hastened his steps. A magnificent mansion, brilliantly illuminated.

The clattering of many hoofs. A cavalry escort, forming up before the house. A pale young man emerged, escorted by a tall, fat man who kissed his hand as if in an ecstasy of admiration. Dismounted cavalymen formed a lane from the gateway to the car. Two young officers followed the pale young man, ablaze with decorations. The deputy from Aisne-le-Sur noted subconsciously that he did not recognize their uniforms. The car door was open and waiting. There was some oddity about the car, but the deputy could not see clearly just what it was.

There was much clicking of heels—steel blades at salute. The pale young man patiently allowed the fat man to kiss his hand again. He entered the car. The two bemedaled young officers climbed in after him. The car rolled away. Instantly, the cavalry escort clattered with it, before it, behind it, all around it.

The fat man stood on the sidewalk, beaming and rubbing his hands together. The dismounted cavalymen swung to their saddles and trotted briskly after the others.

The deputy from Aisne-le-Sur stared blankly. He saw another pedestrian, halted like himself to regard the spectacle. He was disturbed by the fact that this pedestrian was clothed in a fashion as perturbingly unfamiliar as these houses and the spectacle he had witnessed.

"Pardon, m'sieu'," said the deputy from Aisne-le-Sur, "I do not recog-

nize my surroundings. Would you tell me—"

"The house," said the other cautiously, "is the hotel of Monsieur le Duc de Montigny. Is it possible that in 1935 one does not know of Monsieur le Duc? Or more especially of Madame la Duchesse, and what she is and where she lives?"

The deputy from Aisne-le-Sur blinked. "Montigny? Montigny? No," he admitted. "And the young man of the car, whose hand was kissed by—"

"Kissed by Monsieur le Duc?" The stranger stared frankly. "*Mon dieu!* Where have you come from that you do not recognize Louis the Twentieth? He has but departed from a visit to madame his mistress."

"Louis—Louis the Twentieth!" stammered the deputy from Aisne-le-Sur. "I—I do not understand!"

"Fool!" said the stranger impatiently. "That was the king of France, who succeeded his father as a child of ten and has been free of the regency for but six months—and already ruins France!"

THE LONG-DISTANCE operator plugged in with a shaking hand. "Number please. . . . I am sorry, sir, but we are unable to connect you with Camden. . . . The lines are down. . . . Very sorry, sir." She plugged in another line. "Hello. . . . I am sorry, sir, but we are unable to connect you with Jenkins-town. The lines are down. . . . Very sorry, sir."

Another call buzzed and lighted up.

"Hello. . . . I am sorry, sir. We are unable to connect you with Dover. The lines are down. . . ." Her hands worked automatically. "Hello. . . . I am sorry, but we are unable to connect you with New

York. The lines are down. . . . No, sir. We cannot route it by Atlantic City. The lines are down. . . . Yes, sir, I know the telegraph companies cannot guarantee delivery. . . . No, sir, we cannot reach Pittsburgh, either, to get a message through. . . ." Her voice quivered. "No, sir, the lines are down to Scranton. . . . And Harrisburg, too. Yes, sir. . . . I am sorry, but we cannot get a message of any sort out of Philadelphia in any direction. . . . We have tried to arrange communication by radio, but no calls are answered. . . ."

She covered her face with her hands for an instant. Then she plugged in and made a call herself:

"Minnie! Haven't they heard anything? . . . Not anything? . . . What? They phoned for more police? . . . The—the operator out there says there's fighting? She hears a lot of shooting? . . . What is it, Minnie? Don't they even know? . . . They—they're using the armored cars from the banks to fight with, too? . . . But what are they fighting? What? . . . My folks are out there, Minnie! My folks are out there!"

THE DOORWAY of the slave barracks closed and great bars slammed against its outer side. Reeking, foul, unbreathable air closed about them like a wave. Then a babbling of voices all about. The clanking of chains. The rustling of straw, as if animals moved. Some one screeched; howled above the others. He began to gain the ascendancy. There was almost some attention paid to him, though a minor babbling continued all about.

Maida said in a strained voice: "I—I can catch a word here and there. He's—telling these other

slaves how we were captured. It's—Latin, of sorts."

Bertha Ketterling squalled suddenly, in the absolute dark. "Somebody touched me!" she bawled. "A man!"

A voice spoke humorously, somewhere near. There was laughter. It was the howled laughter of animals. Slaves were animals, according to the Roman notion. A rustling noise, as if in the noisome freedom of their barracks the utterly brutalized slaves drew nearer to the newcomers. There could be sport with new-captured folk, not yet degraded to their final status.

Lucy Blair cried out in a stifled fashion. There was a sharp, incisive crack. Somebody fell. More laughter.

"I knocked him out!" snapped Minott. "Harris! Hunter! Feel around for something we can use as clubs! These slaves intend to haze us, and in their own den there's no attempt to control them. Even if they kill us they'll only be whipped for it. And the women will——"

Something, snarling, leaped for him in the darkness. The authoritative tone of Minott's voice was hateful. A yapping sound arose. Other figures closed in. Reduced to the status of animals, the slaves of the Romans behaved as beasts when locked in their monster kennel. The newcomers were hateful if only because they had been freemen, not slaves. The women were clean and they were frightened—and they were prey. Chains clanked ominously. Foul breaths tainted the air. The reek of utter depravity, of human beings brought lower than beasts, filled the air. It was utterly dark.

Bertha Ketterling began to blubber noisily. There was the sudden

savage sound of a blow meeting flesh. Then pandemonium and battle, and the sudden terrified screams of Lucy Blair. The panting of men who fought. The sound of blows. A man howled. Another shrieked curses. A woman screamed shrilly.

Bang! Bang! Bang-bang! Shots outside, a veritable fusillade of them. Running feet. Shouts. The bars at the doorway fell. The great doors opened, and men stood in the opening with whips and torches, bellying for the slaves to come out and attack something yet unknown. They were being called from their kennel like dogs. Four of the whip men came inside, flogging the slaves out, while the sound of shots continued. The slaves shrank away, or bounded howling for the open air. But there were three of them who would never shrink or cringe again.

Minott and Harris stood embattled in a corner of the slave shed. Lucy Blair, her hair disheveled, crouched behind Minott, who held a heavy beam in desperate readiness for further battle. Harris, likewise, held a clumsy club. With torchlight upon him, his air of savage defiance turned to one of quaint apology for the dead slave at his feet. And Hunter and two of the girls competed in stark panic for a position behind him. Maida Haynes, dead white, stood backed against a wall, a jagged fragment of gnawed bone held daggerwise.

The whips lashed out at them. Voices snarled at them. The whips again. Minott struck out furiously, a huge welt across his face.

And revolvers cracked at the great door. Blake stood there, a revolver in each hand, his eyes blazing. A torchbearer dropped, and the torches flared smokily in the foul mud of the flooring.

"All right," said Blake fiercely. "Come on out!"

Hunter was the first to reach him, babbling and gasping. There was sheer uproar all about. A huge grain shed roared upward in flames. Figures rushed crazily all about it. From the flames came another explosion, then two, then three more.

"Horses over here by the stables," said Blake, his face white and very deadly indeed. "They haven't unsaddled them. The stable slaves haven't figured out the cinches yet. I put some revolver bullets in the straw when I set fire to that grain shed. They're going off from time to time."

A figure with whip and dagger raced around an outbuilding and confronted them. Blake shot him down.

Minott said hoarsely: "Give me a revolver, Blake! I want to——"

"Horses first!" snapped Blake.

They raced into a courtyard. Two shots. The slaves fled, howling. Out of the courtyard, bent low in the saddle. They swept close to the villa itself. On a little raised terrace before it, a stout man in an only slightly modified toga raged. A slave groveled before him. He kicked the abject figure and strode out, shouting commands in a voice that cracked with fury. The horses loomed up and he shook his fists at the riders, purple with wrath, incapable of fear because of his beastly rage.

Blake shot him dead, swung off his horse, and stripped the toga from him. He flung it to Maida.

"Take this!" he said savagely. "I could kill——"

There was now no question of his leadership. He led the retreat from the villa. The eight horses headed north again, straight for the luridly flaming forset.

They stopped once more. Behind them, another building of the estate had caught from the first. Sheer confusion ruled. The slaughter of the master disrupted all organization. The roof of the slave barracks caught. Screams and howls of pure panic reached even the fugitives. Then there were racing, maddened figures rushing here and there in the glare of the fires. Suddenly there was fighting. A howling ululation arose.

Minott worked savagely, stripping clothing from the bodies slain in that incredible, unrecorded conflict of Confederate soldiers and Roman troops, in some unguessable pathway of space and time. Blake watched behind, but he curtly commanded the salvaging of rifles and ammunition from the dead Confederates—if they were Confederates.

And as Hunter, still gasping hysterically, took the load of yet unfamiliar weapons upon his horse, the eight felt a certain incredible, intolerable vertigo and nausea. The burning forest ahead vanished from their sight. Instead, there was darkness. A noisesome smell came down wind; dampness and strange, overpowering perfumes of strange, colored flowers. Something huge and deadly bellowed in the space before them which smelled like a monstrous swamp.

THE LINER *City of Baltimore* plowed through the open sea in the first pale light of dawn. The skipper, up on the bridge, wore a worried frown. The radio operator came up. He carried a sheaf of radiogram forms. His eyes were blurry with loss of sleep.

"Maybe it was me, sir," he reported heavily. "I felt awful funny for a while last night, and then all night long I couldn't raise a sta-

tion. I checked everything and couldn't find anything wrong. But just now I felt awful sick and funny for a minute, and when I come out of it the air was full of code. Here's some of it. I don't understand how I could have been sick so I couldn't hear code, sir, but—"

The skipper said abruptly: "I had that sick feeling, too—dizzy. So did the man at the wheel. So did everybody. Give me the messages."

His eyes ran swiftly over the yellow forms.

"News flash: Half of London disappeared at 2:00 a. m. this morning. . . . S. S. *Manzanillo* reporting. Sea serpent which attacked this ship during the night and seized four sailors returned and was rammed five minutes ago. It seems to be dying. Our bow badly smashed. Two forward compartments flooded. . . . Warning to all mariners. Pack ice seen floating fifty miles off New York harbor.

. . . . News flash: Madrid, Spain, has undergone inexplicable change. All buildings formerly known now unrecognizable from the air. Air fields have vanished. Mosques seem to have taken the place of churches and cathedrals. A flag bearing the crescent floats. . . . European population of Calcutta seems to have been massacred. S. S. *Carib* reports harbor empty, all signs of European domination vanished, and hostile mobs lining shore. . . ."

The skipper of the *City of Baltimore* passed his hand over his forehead. He looked uneasily at the radio operator. "Sparks," he said gently, "you'd better go see the ship's doctor. Here! I'll detail a man to go with you."

"I know," said Sparks bitterly. "I guess I'm nuts, all right. But that's what come through."

He marched away with his head

hanging, escorted by a sailor. A little speck of smoke appeared dead ahead. It became swiftly larger. With the combined speed of the two vessels, in a quarter of an hour the other ship was visible. In half an hour it could be made out clearly. It was long and low and painted black, but the first incredible thing was that it was a paddle steamer, with two sets of paddles instead of one, and the after set revolving more swiftly than the forward.

The skipper of the *City of Baltimore* looked more closely through his glasses and nearly dropped them in stark amazement. The flag flying on the other ship was black and white only. A beam wind blew it out swiftly. A white death's-head, with two crossed bones below it—the traditional flag of piracy!

Signal flags fluttered up in the rigging of the other ship. The skipper of the *City of Baltimore* gazed at them, stunned.

"Gibberish!" he muttered. "It don't make sense! They aren't international code. Not the same flags at all!"

Then a gun spoke. A monstrous puff of black powder smoke billowed over the other ship's bow. A heavy shot crashed into the forepart of the *City of Baltimore*. An instant later it exploded.

"I'm crazy, too!" said the skipper dazedly.

A second shot. A third and fourth. The black steamer sheered off and started to pound the *City of Baltimore* in a businesslike fashion. Half the bridge went overside. The forward cargo hatch blew up with a cloud of smoke from an explosion underneath.

Then the skipper came to. He roared orders. The big ship heeled as it came around. It plunged for-

ward at vastly more than its normal cruising speed. The guns on the other ship doubled and redoubled their rate of fire. Then the black ship tried to dodge. But it had not time.

The *City of Baltimore* rammed it. But at the very last moment the skipper felt certain of his own insanity. It was too late to save the other ship then. The *City of Baltimore* cut it in two.

XII.

THE PALE gray light of dawn filtered down through an incredible thickness of foliage. It was a subdued, a feeble twilight when it reached the earth where a tiny camp fire burned. That fire gave off thick smoke from water-soaked wood. Hunter tended it, clad in ill-assorted remnants of a gray uniform.

Harris worked patiently at a rifle, trying to understand exactly how it worked. It was unlike any rifle with which he was familiar. The bolt action was not really a bolt action at all, and he'd noticed that there was no rifling in the barrel. He was trying to understand how the long bullet was made to revolve. Harris, too, had substituted Confederate gray for the loin cloth flung him for sole covering when with the others he was thrust into the slave pen of the Roman villa. Minott sat with his head in his hands, staring at the opposite side of the stream. On his face was all bitterness.

Blake listened. Maida Haynes sat and looked at him. Lucy Blair darted furtive, somehow wistful, glances at Minott. Presently she moved to sit beside him. She asked him an anxious question. The other two girls sat by the fire. Bertha Ketterling was slouched back against a tree-fern trunk. Her head had fallen back. She snored. With

the exception of Blake, all of them were barefoot.

Blake came back to the fire. He nodded across the little stream. "We seem to have come to the edge of a time fault," he observed. "This side of the stream is definitely Carboniferous-period vegetation. The other side isn't as primitive, but it isn't of our time, anyhow. Professor Minott!"

Minott lifted his head. "Well?" he demanded bitterly.

"We need some information," said Blake. "We've been here for hours, and there's been no further change in time paths that we've noticed. Is it likely that the scrambling of time and space is ended, sir? If it has, and the time paths stay jumbled, we'll never find our world intact, of course, but we can hunt for colonies, perhaps even cities, of our own kind of people."

"If we do," said Minott bitterly, "how far will we get? We're practically unarmed. We can't——"

Blake pointed to the salvaged rifles. "Harris is working on the arms problem now," he said dryly. "Besides, the girls didn't take the revolvers from their saddlebags. We've still two revolvers for each man and an extra pair. Those Romans thought the saddlebags were decorations, perhaps, or they intended to examine the saddles as a whole. We'll make out. What I want to know is, has the time-scrambling process stopped?"

Lucy Blair said something in a low tone. But Minott glanced at Maida Haynes. She was regarding Blake worshipfully.

Minott's eyes burned. He scowled in surpassing bitterness. "It probably hasn't," he said harshly. "I expect it to keep up for probably two weeks or more of—of duration. I use that term to mean time elapsed

in all the time paths simultaneously. We can't help thinking of time as passing on our particular time path only. Yes. I expect disturbances to continue for two weeks or more, if everything in time and space is not annihilated."

Blake sat down.

Insensibly Maida Haynes moved closer to him. "Could you explain, sir? We can only wait here. As nearly as I can tell from the topography, there's a village across this little stream in our time. It ought to be in sight if our time path ever turns up in view, here."

Minott unconsciously reassumed some of his former authoritative manner. Their capture and scornful dismissal to the status of slaves had shaken all his self-confidence. Before, he had felt himself not only a member of a superior race, but a superior member of that race. In being enslaved he had been both degraded and scorned. His vanity was still gnawed at by that memory, and his self-confidence shattered by the fact that he had been able to kill only two utterly brutalized slaves, without in the least contributing to his own freedom. Now, for the first time, his voice took on a semblance of its old ring.

"We—we know that gravity warps space," he said precisely. "From observation we have been able to discover the amount of warping produced by a given mass. We can calculate the mass necessary to warp space so that it will close in completely, making a closed universe which is unreachable and undetectable in any of the dimensions we know. We know, for example, that if two gigantic star masses of a certain combined mass were to rush together, at the instant of their collision there would not be a great cataclysm. They would simply van-

ish. But they would not cease to exist. They would merely cease to exist in our space and time. They would have created a space and time of their own."

Harris said apologetically "Like crawling in a hole and pulling the hole in after you. I read something like that in a Sunday supplement once, sir."

Minott nodded. He went on in a near approach to a classroom manner. "Now, imagine that two such universes have been formed. They are both invisible from the space and time in which they were formed. Each exists in its own space and time, just as our universe does. But each must also exist in a certain—well, hyper-space, because if closed spaces are separated, there must be some sort of something in between them, else they would be together."

"Really," said Blake, "you're talking about something we can infer, but ordinarily can't possibly learn anything about by observation."

"Just so." Minott nodded. "Still, if our space is closed, we must assume that there are other closed spaces. And don't forget that other closed spaces would be as real—are as real—as our closed space is."

"But what does it mean?" asked Blake.

"If there are other closed spaces like ours, and they exist in a common medium—the hyper-space from which they and we alike are sealed off—they might be likened to, say, stars and planets in our space, which are separated by space and yet affect each other through space. Since these various closed spaces are separated by a logically necessary hyper-space, it is at least probable that they should affect each other through that hyper-space."

Blake said slowly: "Then the

shiftings of time paths—well, they're the result of something on the order of tidal strains. If another star got close to the sun, our planets would crack up from tidal strains alone. You're suggesting that another closed space has got close to our closed space in hyper-space. It's awfully confused, sir."

"I have calculated it," said Minott harshly. "The odds are four to one that space and time and universe, every star and every galaxy in the skies, will be obliterated in one monstrous cataclysm when even the past will never have been. But there is one chance in four, and I planned to take full advantage of it. I planned—I planned——"

THEN he stood up suddenly. His figure straightened. He struck his hands together savagely. "By Heaven, I still plan! We have arms. We have books, technical knowledge, formulas—the cream of the technical knowledge of earth packed in our saddlebags! Listen to me! We cross this stream now. When the next change comes, we strike across whatever time path takes the place of this. We make for the Potomac, where that aviator saw Norse ships drawn up! I have Anglo-Saxon and early Norse vocabularies in the saddlebags. We'll make friends with them. We'll teach them. We'll lead them. We'll make ourselves masters of the world and——"

Harris said apologetically: "I'm sorry, sir, but I promised Bertha I'd take her home, if it was humanly possible. I have to do it. I can't join you in becoming an emperor, even if the breaks are right."

Minott scowled at him.

"Hunter?"

"I—I'll do as the others do," said

Hunter uneasily. "I—I'd rather go home."

"Fool!" snarled Minott.

Lucy Blair said loyally: "I—I'd like to be an empress, Professor Minott."

Maida Haynes stared at her. She opened her mouth to speak. Blake absently pulled a revolver from his pocket and looked at it meditatively as Minott clenched and unclenched his hands. The veins stood out on his forehead. He began to breathe heavily.

"Fools!" he roared. "Fools! You'll never get back! Yet you throw away——"

Swift, sharp, agonizing vertigo smote them all. The revolver fell from Blake's hands. He looked up. A dead silence fell upon all of them.

Blake stood shakily upon his feet. He looked, and looked again. "That——" He swallowed. "That is King George courthouse, in King George County, in Virginia, in our time. I think—— Hell! Let's get across that stream."

He picked up Maida in his arms. He started.

Minott moved quickly and croaked: "Wait!"

He had Blake's dropped revolver in his hand. He was desperate, hunted; gray with rage and despair. "I—I offer you, for the last time—I offer you riches, power, women and——"

Harris stood up, the Confederate rifle still in his hands. He brought the barrel down smartly upon Minott's wrist.

Blake waded across and put Maida safely down upon the shore. Hunter was splashing frantically through the shallow water. Harris was shaking Bertha Ketterling to wake her. Blake splashed back. He rounded up the horses. He loaded the sal-

vaged weapons over a saddle. He shepherded the three remaining girls over. Hunter was out of sight. He had fled toward the painted buildings of the courthouse. Blake led the horses across the stream. Minott nursed his numbed wrist. His eyes blazed with the fury of utter despair.

"Better come along," said Blake quietly.

"And be a professor of mathematics?" Minott laughed savagely. "No! I stay here!"

Blake considered. Minott was a strange, an unprepossessing figure. He was haggard. He was desperate. Standing against the background of a carboniferous jungle, in the misfitting uniform he had stripped from a dead man in some other path of time, he was even pitiable. Shoeless, unshaven, desperate, he was utterly defiant.

"Wait!" said Blake.

He stripped off the saddlebags from six of the horses. He heaped them on the remaining two. He led those two back across the stream and tethered them.

Minott regarded him with an implacable hatred. "If I hadn't chosen you," he said harshly, "I'd have carried my original plan through. I knew I shouldn't choose you. Maida liked you too well. And I wanted her for myself. It was my mistake, my only one."

Blake shrugged. He went back across the stream and remounted.

Lucy Blair looked doubtfully back at the solitary, savage figure. "He's—brave, anyhow," she said unhappily.

A faint, almost imperceptible, dizziness affected all of them. It passed. By instinct they looked back at the tall jungle. It still stood. Minott looked bitterly after them.

"I've—I've something I want to say!" said Lucy Blair breathlessly. "D-don't wait for me!"

She wheeled her horse about and rode for the stream. Again that faint, nearly imperceptible, dizziness. Lucy slapped her horse's flank frantically.

Maida cried out: "Wait, Lucy! It's going to shift——"

And Lucy cried over her shoulder: "That's what I want! I'm going to stay——"

She was halfway across the stream—more than halfway. Then the vertigo struck all of them.

XIII.

EVERY ONE knows the rest of the story. For two weeks longer there were still occasional shiftings of the time paths. But gradually it became noticeable that the number of time faults—in Professor Minott's phrase—were decreasing in number. At the most drastic period, it has been estimated that no less than twenty-five per cent of the whole earth's surface was at a given moment in some other time path than its own. We do not know of any portion of the earth which did not vary from its own time path at some period of the disturbance.

That means, of course, that practically one hundred per cent of the earth's population encountered the conditions caused by the earth's extraordinary oscillations sidewise in time. Our scientists are no longer quite as dogmatic as they used to be. The dialectics of philosophy have received a serious jolt. Basic ideas in botany, zoölogy, and even philology have been altered by the new facts made available by our travels sidewise in time.

Because of course it was the fourth chance which happened, and

the earth survived. In our time path, at any rate. The survivors of Minott's exploring party reached King George courthouse barely a quarter of an hour after the time shift which carried Minott and Lucy Blair out of our space and time forever. Blake and Harris searched for a means of transmitting the information they possessed to the world at large. Through a lonely radio amateur a mile from the village, they sent out Minott's theory on short waves. Shorn of Minott's pessimistic analysis of the probabilities of survival, it went swiftly to every part of the world then in its proper relative position. It was valuable, in that it checked explorations in force which in some places had been planned. It prevented, for example, a punitive military expedition from going past a time fault in Georgia, past which a scalping party of Indians from an uncivilized America had retreated. It prevented the dispatch of a squadron of destroyers to find and seize Leifsholm, from which a viking foray had been made upon North Centerville, Massachusetts. A squadron of mapping planes was recalled from reconnaissance work above a carboniferous swamp in West Virginia, just before the time shift which would have isolated them forever.

Some things, though, no knowledge could prevent. It has been estimated that no less than five thousand persons in the United States are missing from their own space and time, through having adventured into the strange landscapes which appeared so suddenly. Many must have perished. Some, we feel sure, have come in contact with one or another of the distinct civilizations we now know exist.

Conversely, we have gained inhabitants from other time paths.

Two cohorts of the Twenty-second Roman Legion were left upon our soil near Ithaca, New York. Four families of Chinese peasants essayed to pick berries in what they considered a miraculous strawberry-patch in Virginia, and remained there when that section of ground returned to its proper *milieu*.

A Russian village remains in Colorado. A French settlement in the—in their time undeveloped—Middle West. A part of the northern herd of buffalo has returned to us, two hundred thousand strong, together with a village of Cheyenne Indians who had never seen either horses or firearms. The passenger pigeon, to the number of a billion and a half birds, has returned to North America.

But our losses are heavy. Besides those daring individuals who were carried away upon the strange territories they were exploring, there are the overwhelming disasters affecting Tokio and Rio de Janeiro and Detroit. The first two we understand. When the causes of oscillation sidewise in time were removed, most of the earth sections returned to their proper positions in their own time paths. But not all. There is a section of Post-Cambrian jungle left in eastern Tennessee. The Russian village in Colorado has been mentioned, and the French trading post in the Middle West. In some cases sections of the oscillating time paths remained in new positions, remote from their points of origin.

That is the cause of the utter disappearance of Rio and of Tokio. Where Rio stood, an untouched jungle remains. It is of our own geological period, but it is simply from a path in time in which Rio de Janeiro never happened to be built.

On the site of Tokio stands a forest of extraordinarily primitive type, about which botanists and paleontologists still debate. Somewhere, in some space and time, Tokio and Rio yet exist and their people still live on. But Detroit—

We still do not understand what happened to Detroit. It was upon an oscillating segment of earth. It vanished from our time, and it returned to our time. But its inhabitants did not come back with it. The city was empty—deserted as if the hundreds of thousands of human beings who lived in it had simply evaporated into the air. There have been some few signs of struggle seen, but they may have been the result of panic. The city of Detroit returned to its own space and time untouched, unharmed, unlooted, and undisturbed. But no living thing, not even a domestic animal or a caged bird, was in it when it came back. We do not understand that at all.

Perhaps if Professor Minott had returned to us, he could have guessed at the answer to the riddle. What fragmentary papers of his have been shown to refer to the time upheaval have been of inestimable value. Our whole theory of what happened depends on the papers Minott left behind as too unimportant to bother with, in addition, of course, to Blake's and Harris' account of his explanations to them. Tom Hunter can remember little that is useful. Maida Haynes has given some worth-while data, but it covers ground we have other observers for. Bertha Ketterling also reports very little.

The answers to a myriad problems yet elude us, but in the saddlebags given to Minott by Blake as equipment for his desperate journey through space and time, the answers

to many must remain. Our scientists labor diligently to understand and to elaborate the figures Minott thought of trivial significance. And throughout the world many minds turn longingly to certain saddlebags,

loaded on a led horse, following Minott and Lucy Blair through unguessable landscapes, to unimaginable adventures, with revolvers and textbooks as their armament for the conquest of a world.

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The Thing in the Pond

by Paul Ernst

*Illustrated by
C. R. Thomson*

IT WAS LATE afternoon when Gordon Sharpe, tall, lean, and bearded, got out of the hired car at the door of Professor Weidbold's country house. He lifted out his grips and his gun case.

"That must be a right sizable shootin' iron, mister," the driver drawled.

"It's stopped quite a few elephants in its time," replied Sharpe, with his steel-blue eyes twinkling.

The driver glanced oddly at him. "Well, there ain't any elephants around here, but this is a funny part of Florida, mister, just the same."

Sharpe's thick black beard stirred with a grin. "I read about it in the papers last night," he said. "Got a monster or something, down this way, haven't you?"

"That's what they say. Me—I don't take no stock in it."

The hired car rattled off. The

door opened, and Weidbold's servant came out of the house. Sharpe stared at him. He was small, quiet, efficient. Quite different from old Sam Klegg, the sulky, not-too-clean loafer Weidbold had had working for him when Sharpe last visited here.

The man reached for the grips and the gun case.

"I'll carry that," said Sharpe. "Where's the professor?"

"He's out by the pond," replied the servant. "I'll show you to your room and then tell him you're here."

Sharpe went upstairs with the man. When he was alone, he stepped to the window.

His room was at the rear of the combined house and laboratory. Twenty acres of weeds and neglect stretched before his eyes from the house to a small, marshy puddle called Greer's Pond. Sharpe remembered this as a stagnant pool, fed by seepage, heated to blood warmth by the Florida sun. It was rather deep, and it teemed with small life.

He could see the sluggish glint of the water now, and, at one end, the stoop-shouldered, shambling figure of Professor Weidbold. Then he saw the servant start across the fields and noted his grim, precise walk. The man contrasted humorously with the surly ruffian, Sam Klegg, who had worked here ten years ago.

Sharpe went downstairs to the laboratory. Weidbold spent most of his waking hours here. He would expect to meet his ex-pupil there.

The tanned, powerful African explorer blinked as he entered the cool dimness of the laboratory. Then he saw that all was unchanged.

There was the delicate device for registering the minute quantities of electricity generated by a growing plant. There was the little glass case in which Weidbold had kept a bit of muscle from the heart of a chicken,

a lump no larger than the head of a match, living and growing in a salt solution for sixteen years. Here was the complicated apparatus with which Weidbold increased the chlorophyll content in plants with ultraviolet rays. Then came cases of zoölogical monstrosities—newts with three eyes, salamanders with tails where their legs should be, and heads grafted on where their tails should be.

THE DOOR of the laboratory opened.

"Gordon!" exclaimed Professor Weidbold, coming in. "It's good to see you again. You're looking fine."

"Nothing seems changed," said Sharpe heartily. "I might have stepped out yesterday instead of ten years ago. The only new thing is your servant. You fired Sam Klegg at last, eh?"

"Yes," said the professor, a muscle twitching in his cheek. "A few weeks after you'd left. I wrote you about it, I think."

"You did. And you wrote me, too, that the sullen fellow took a mean revenge by dumping several casks of chemicals and some of your most valuable laboratory equipment into Greer's Pond."

The professor looked so distressed that Sharpe put his big arm affectionately over the thin shoulders.

"It's ancient history now," he said. Then: "Why on earth did you ask me to bring an elephant gun when I came for the visit? Are you going into ballistics now?"

Weidbold did not smile back. "Not exactly," he murmured, avoiding Sharpe's gaze.

"Then," Sharpe returned, laughing, "it must be you wanted me to use it on the monster in your pool."

Professor Weidbold did not smile

at this, either. "So you've heard," he said.

"I've heard of little else in the last twenty-four hours," Sharpe responded, gazing at the professor with worried eyes. "The Associated Press got the story. The whole country is laughing at the hoax. You'll probably have pilgrims to Greer's Pond by the thousands in a few days."

"What did the papers say about the—hoax?"

Sharpe lighted his pipe, his eyes continuing to probe Weidbold's. "The New York papers say there is a dinosaur alive down here. The Chicago sheets think it's a sea serpent. But of course nobody really believes there's anything cooped up in your spoonful of water. It's just another tall tale, like that of the monster in the Scottish loch a few months ago."

Again the muscle twitched in Weidbold's cheek. Sharpe's fingers tightened on the bowl of his pipe. The old man looked as if he actually put credence in this silly story of a monster in Greer's Pond. He must have broken recently in mind as well as in health not to laugh with a scientist's skepticism at such talk.

A monster! In Greer's Pond!

"Of course there may actually be some big beast, like an alligator, in the pool," said Sharpe, keeping his tone light. "It'll be sport to find out. We'll go hunting to-morrow. We'll take your spaniel, Spot——"

"Spot's dead," Weidbold interrupted heavily.

Sharpe whistled. "Too bad! Run over by an automobile?"

"No," said Weidbold; "drowned. In Greer's Pond. It was three nights ago. I heard him barking as if his throat would split, out by the pond. Then, suddenly, the barking ceased."

The professor stared abstractedly

at a glass case in which a curious monstrosity, a newt with two heads, from an egg cell half divided in embryo, was preserved.

"I went back to sleep, thinking little of it. But next morning Spot didn't appear, so I wandered over to the pond. I saw his tracks in the soft mud next to the water's edge. They went into the water and disappeared."

"That sounds like a 'gator, all right," Sharpe nodded. "They go for dogs."

"An alligator?" mused Weidbold. "Possibly. But Raeburn, who owns the land behind mine, doesn't think so. He thinks that if a big alligator was in the pool, it would be seen often on the surface of the water or on the bank. And Raeburn has never actually seen anything. Nor have I."

"Why not drain the pond?" asked Sharpe.

Weidbold sighed. "I am a poor man. Due to the lie of the land, draining would cost more than my entire fortune." He cleared his throat. "Come on out and look around now, will you? I saw something rather interesting this noon. I was out looking at it again when you arrived."

"Certainly," said Sharpe. "Shall I take my gun?"

He had tried to make his voice careless, but some tone in it must have sounded wrong.

"You think I'm a little mad, don't you?" said Weidbold. "Well, no matter. Come along."

THEY went out by the laboratory door and started across the neglected acreage behind the house to Greer's Pond. Far off was the country road. They saw several cars slow down as they passed.

"Sight-seers will be swarming here

pretty soon to look at the monster in the pond," predicted Sharpe.

Weidbold shivered as if he were cold. "I know. Dozens of people crowding around the edge of the pool— Something must be done at once."

They reached the scum-flecked pond. Sharpe remembered it well. He and Weidbold had seined out many a wriggling subject for laboratory experimentation. Oddly, he saw no small life now.

"Here," said Weidbold, in a low, strained tone. "This is what I wanted to show you."

Sharpe gazed where the old professor pointed. He saw cow tracks—ordinary cow tracks etched in the mud by the water. A fresh wave of pity for Weidbold grew in his breast.

Then he moistened his lips as he peered closer at the tracks, and he forgot to pity Weidbold so tolerantly.

The cow tracks led from the property on Raeburn's side of the pond to the edge of the pool. Indistinct till they reached the mud, they were only too clear there.

The tracks were deep. They were slurred and close-bunched. The animal that had made them had been pulling back frantically, straining back with deep-planted hoofs from the water and being inexorably hauled into it just the same.

The tracks all pointed one way—into the pond. None came back from it.

"It must have been a monster 'gator," muttered Sharpe stubbornly. "It *must* have been—"

But there were no 'gator tracks anywhere to be seen. Instead, half effacing the cow tracks in some places, there was something the like of which he had never observed in all his big-game hunting days.

The mud around some of the cow

tracks had been pressed flat and smooth as if a heavy, fat body had slithered across there.

"Here comes my neighbor," he heard Weidbold say.

He looked up and saw a man approaching them. He was a big, burly fellow in faded-blue overalls. He was striding toward them aggressively, swiftly, glaring at the professor as he came.

"I might have knowed I should look here first for my cow," he shouted when he was still fifty yards from them. "Spent the hull day phoning around to see if she'd gone into some one else's barn. But I should have knowed where she'd disappeared to!"

He reached them with the last words and took just one look at the tracks. His black eyes glittered with rage.

"Perfessor," he grated, "what the hell's in this pond? What in tarnation"—he glared at the tracks—"can drag a full-grown Guernsey down into the water?"

"Who knows, Raeburn!" said Weidbold, his old voice tremulous. "I lost my dog, you know, a few nights ago."

"It's probably a 'gator," Sharpe offered.

Raeburn whirled on him. "A 'gator! Whoever you are and wherever you come from, I reckon you must know better than that. You don't see any tracks, do you? And nobody's ever seen one sunnin' itself, have they? And what would one 'gator do with a hull cow?"

He whirled back to Weidbold, and his voice tensed Sharpe's muscles angrily.

"Perfessor, we've been mighty tolerant around here about the devil's work you do alone in that lab'atory of your'n. We ain't said nothing and we ain't done nothing, though we all

knew your work was agin' nature. Now I reckon it's time to think of acting. You know—there has been folks lynched around this part of the country."

Sharpe's fists clenched, but he remembered that this man had just lost a valuable animal.

"Why do you talk like that to me?" faltered the old professor. "Whatever is in this pond——"

"Perfessor," Raeburn interrupted, "you know what's in that pond! I don't, and no one else does—but you do. I can see it in your face. I been seein' it there for a month."

"I assure you——" mumbled Weidbold.

But Raeburn didn't stop to hear. He turned on his heel and walked away.

Sharpe gazed at Weidbold.

"You see," murmured the professor wearily, "I have something actual to fear, regardless of what may or may not be in that slimy water."

Sharpe's gaze held steady. "What is in there, professor?"

"I—I haven't the faintest idea. As a scientist I simply cannot admit that——"

"What?" Sharpe rapped out, as the old man stopped.

"Nothing." Weidbold sighed. And he would say no more.

SHARPE turned from him to stare at the pond again. Covered in spots with green scum, clear in spots like a black mirror, the surface of the opaque water lay without a ripple to feather it. The eye could not penetrate more than a foot or so down into the motionless, silt-filled pool.

Sharpe stared harder.

No movement? No ripples? But there were.

In the center of the pond a faint stir of water grew regularly into be-

ing—so faint that Sharpe had not caught it till now. It ringed out, wider and wider, barely stirring the scum, till it reached the shores.

In slow, rhythmic succession, the ripples ringed from the center of the pond to stir at last along the shore. As if something down under there was breathing, with a slow heave of sides or gills. Or as if a mighty heart was beating down there, with each slow pulsation registering on the recording surface of the pool. That was more apt. The water was stirring faintly, regularly, like a huge, slow pulse.

Sharpe's finger nails pressed into the palms of his hands; but his voice was even as he said: "Got any meat in your refrigerator?"

Weidbold glanced at him quickly. It was impossible to guess whether his old eyes had been alert enough to catch the steady stir of the water.

"I have a slab of bacon and some beef," he said.

"Good!" Sharpe's voice was incisive. "We won't wait till to-morrow to hunt. Visitors might be crowding in by then, and that might be—unhealthy. Would you mind stepping to the house and asking your man to bring my gun and the meat here to me?"

Weidbold nodded and turned away. Sharpe watched him shamle across the field, then turned back to watch the enigmatic surface of the pond. Down in its mysterious, black depths——

Weidbold brought the meat and gun back himself. Sharpe frowned at him.

"No need for you to stay around, sir. Nothing may rise to this bait at all, since the cow was dragged in so recently."

"I will stay," said the old professor.

"There might be danger——"

"I will stay, Gordon."

Sharpe shrugged, and loaded the big gun. They went to the edge of the pond, not speaking to each other, not looking at each other.

Sharpe threw the slab of bacon as near to the center of the pool as he could. It splashed in the green scum.

There was no answering splash. Ripples welled out from the disturbance and gradually subsided. That was all.

"It—it might be that the—the thing has such a low nervous organization that it can't tell when food or prey is near," faltered Weidbold. His face was white and his hands were shaking.

"We might ask the cow what her opinion is," said Sharpe.

He picked up the chunk of beef and sent it after the bacon. It hit the scum even nearer the center of the pool.

The slimy surface of the pond boiled a little near the meat. It seemed to hump up slightly. Grimly, silently, the commotion in the water grew. With strained intensity the two men stared.

Something broke the surface of the pond; something that was pallidly pink and smooth and glistening; something that was hollowed in the center like a gigantic cup.

The monstrous cup closed around the meat just as Sharpe's gun roared out. Both men saw a hole torn in the pink fringe of the cup. Both men saw the fringe continue to clamp down over the meat as if nothing had happened. Then the thing sank silently under the water. There was a soft sucking noise as an eddy whirled above. The eddy died down and there was nothing.

Sharpe wiped the palms of his hands on his trouser legs.

"It didn't even feel it!" he breathed, his eyes wide and staring.

"A slug that would have stopped an elephant, and it didn't even feel it!"

Weidbold's trembling fingers were plucking at his lips.

"Like firing into a sofa cushion," Sharpe went on. "No chance for the explosive bullet to get in its work. It simply tore through——"

He stopped abruptly. Weidbold's hand clutched convulsively at his arm. The two glared at the water before them.

A commotion was growing there. Once again the green scum was humping upward as something sluggishly sought the surface. And the commotion rippled the stagnant, warm water in a straight line for the spot where Sharpe and Weidbold stood.

WITH a hoarse exclamation, Sharpe jerked his arm from the professor's clutch and ripped the bolt of his gun out and back. He leveled it toward the seething water.

The surface of the water broke at last, almost at their feet. Something pallidly pink shone wet and sleek above the green scum. It was coming steadily through the water toward them.

It reached the shore—rather, the front of it reached the shore. The rear of it trailed back out of sight in the black water. It began, with a queer hitching movement, to climb out onto the mud.

Something roughly oblong and flat, like an undulating pink blanket—something that was simply a blind, sluggish lump, without limbs or tentacles, exuding mucus to protect its tender-looking surface from twigs and pebbles in the mud.

As the thing crawled farther and farther up on the bank it seemed to slough off chunks of itself. But in an instant it was apparent that the chunks were half-dissolved bits of

meat. A horn dropped, and some whitened bones, and the skull of a cow.

"Shoot!" cried the professor.

Sharpe only stood there, peering over his sights at the thing. It hitched toward them, progressing by humping itself up in folds and then straightening out—expanding and contracting in rhythmic waves of movement. And still its bulk trailed endlessly from the pond.

"Shoot!" screeched Weidbold.

Sharpe pressed the trigger.

Again the heavy-caliber gun roared out in the silent afternoon. Again a big bullet tore into the viscous, tender-looking pink mass. And again it sliced right through, with not enough resistance offered for the explosion of the bullet.

A jagged hole, oozing straw-colored fluid, yawned in the loathsome pinkish mass. The bulk of it stirred as the bullet exploded in the mud beneath. But it kept on coming.

Both men ran, sweat streaming down their faces—ran as if pursued by fiends.

A hundred yards away they stopped and looked back.

There was a subsiding commotion at the water's edge. Something flipped sluggishly up from the green scum and then sank.

"Maybe—it's dead," quavered Professor Weidbold.

Sharpe drew a long breath, and then began to stride purposefully toward the house.

"You know better than that," he said quietly. "That thing could never die. It could be blown to bits and still not die. Because it isn't alive; not as a complete organism, anyhow. It has no nervous system; it has no vital organs; it simply has cellular, multifarious life. Isn't that right, professor?"

Weidbold said nothing. He hur-

ried to keep pace with Sharpe's long strides.

"What are you going to do, Gordon?" he asked as they neared the house.

"I'm going to do some telephoning," he said. "I am going to order some dynamite and about a carload of sulphuric acid, and I'm going to have a contractor come out first thing in the morning. We'll dynamite the pool at dawn. Then the contractor can put up a high fence. After that we'll sluice the pool with sulphuric acid and keep sluicing it. That's the only way I can think of to destroy utterly the thing in the pond. And if it isn't destroyed," he added grimly, "I see no reason why it shouldn't keep on growing indefinitely, till it's the size of a ten-story building. Do you?"

Weidbold only looked at him, miserably, imploringly.

NEXT morning, with pearl first streaking the east, the two went back to the pond. Sharpe walked carefully, carrying half a dozen sticks of dynamite tied in a bundle with a short fuse attached.

The pond looked like a great, green-flecked fire opal in the early morning. Sharpe stared at it. Off center a little, perhaps thirty yards from where they stood, a faint ripple formed regularly on the still surface, to ring the stagnant water and subside gently on the shores. Beat, beat, beat.

Sharpe lighted the fuse and threw the bundle of dynamite.

It fell with a splash in the center of the rhythmic ripples. Both men ran from the pool, covering their ears, holding their mouths open.

There was a thunderous roar before they had taken twenty steps. They were knocked from their feet.

Water and mud rained down on

them. Water and mud, and something else—fragments of pallid pinkish substance that struck down on them like clammy hands, to plop off onto the ground, and to begin at once, with queer, humping movements, to slide back to the boiling, half-emptied pond.

Alive, but not alive! Frightful, blind growth, as vital and indestructible as the living, primal ooze!

"No death for it but utter annihilation," muttered Sharpe. "But it will be weeks before any of the pieces can become dangerously big. Long before that we'll have the place burned out with acid."

The two got up slowly. Sharpe looked at the professor for a long time.

"I know what you're thinking," said Weidbold. "But it can't be true. It can't! By all the laws of biology it can't——"

"Professor," said Sharpe, "it was about ten years ago that your discharged servant got back at you by dumping that laboratory stuff into the pool, wasn't it?"

"Yes," said the old man, his lips twitching.

"Among the stuff was a lot of sodium, potassium, and calcium salts, and probably a barrel of sugar," guessed Sharpe.

"Y-yes," admitted Weidbold.

"Now, while I was here ten years ago you cut off a bit of that chicken-heart muscle you've kept living and pulsing for sixteen years in a solution of potassium, calcium, sodium, and sugar. I remember that distinctly. You've cut off several bits; otherwise the stuff would outgrow the nourishment-capacity of the case. What happened to that fragment?"

"I—it got lost, or something."

"It's conceivable that it was among the stuff your servant dumped into the pond, isn't it?"

"Such a fantastic accident——" mumbled Weidbold.

"All accidents are fantastic," said Sharpe curtly. "That's why they call them accidents. It's conceivable——isn't it?"

Weidbold nodded.

"And in this warm, life-filled pond," Sharpe pursued relentlessly, "the tiny bit of muscle substance flourished. It absorbed the chemicals freakishly dumped in with it, and finally all the small life. Then it began to reach out for more food in its voracious growth."

"I tell you it's impossible!" almost shrieked the professor. "It could not live outside a laboratory! Ask any scientist——"

"I'd prefer to ask Raeburn's cow or your dog," Sharpe cut in dryly.

Weidbold spread his hands in a defeated gesture. "Gordon," he said in a different tone, "I'm an old man. I have neither the money nor the energy to move to another part of the country and set up my laboratory all over again—which I'd have to do if the people around here believed that some experiment in my laboratory really was responsible for—this. Now—you see how impossible it is that a tiny bit of flesh from the heart of a dead chicken could grow to a thing like—like that, don't you?"

Sharpe watched the last of the small pink fragments fold over on itself on its way to the water of Greer's Pond. The little fragment slipped sluggishly under the green scum of the surface.

"We'll say it's impossible," he conceded at last.



He Never Slept

by John Russell Fearn

Illustrated by M. Marchioni

MY OWN particular participation in that which follows is slight. Merely for the purpose of verification, should you desire it, I state that my name is Richard Finsbury, and that I am a

Londoner born and bred. At any time you may reach me at the Royal College Hospital, London.

I am, in truth, merely the chronicler of a diary, left solely to my discretion by Dr. Jason Veldor, the re-

nowned psychologist, and perhaps at one time the most-sought-after man on mental troubles that ever graced the gray confines of London.

His diary presents a tale as bizarre and extraordinary as any I have yet encountered, but as I personally knew Dr. Veldor extremely well, had witnessed practically all his experiments, and knew him for what he was—an iron-willed, courageous, upright man—I do not for one moment dare to presume that he wrote a single word of falsehood. First let me relate the few events that led up to the final passing into my hands of his amazing diary.

It was, as I remember, a bleak and miserable day in November 1930 when an urgent letter reached me at the College Hospital. It was from Veldor himself, whom I had seen only at infrequent intervals since I had studied medicine under him, and was, I think, his favorite pupil. Without hesitation, my work at that time not being of an exacting nature, I went to his home in Kensington. I remember, as I looked at the worn steps, thinking how many times I had gone up and down them in my days of study.

Walmsley, the manservant, let me in, and in a moment I was in Dr. Veldor's cozy study, and gazing once more on that pleasant but compelling face.

He was almost bald and possessed a remarkably high forehead, while beneath it were his unforgettable, dark-blue, almost hypnotic eyes, magnified slightly by large, gold-rimmed glasses. The hooked, eagle-like nose, downwardly curved thin mouth, and outjutting undimpled chin, all betokened the man of dogmatism and great will power. I never once angered the doctor, nor do I think it would have been a very safe procedure to do so.

"Ah, Richard," he said, using as always my Christian name, "I hope you will forgive me for upsetting your work with my letter, but really I have discovered something extremely interesting; indeed, I ventured to think quite unheard-of as yet in the annals of science." He waved me to a chair and went on with hardly a pause. "You know, Richard, I have always looked upon you as something very close to a son. Your views and ideals are very closely allied to mine. You know that?" His big, magnetic eyes looked into mine.

"Of course, sir," I answered, helping myself to a cigarette from the box he pushed across the paper-littered desk. "Everything you do is of the greatest interest to me. After all, not every young medical student in London can call the great Dr. Veldor his friend."

He laughed slightly. "Forget my fame, Richard—forget everything save the fact that I am going to talk to you as man to man. I have great faith in you, my boy—faith that one day you will take up scientific medicine where I leave it off. It is because I may leave off a trifle sooner than is normal that I have sent for you."

I started at that. "But, sir, you don't mean that—"

He waved me into silence with a big, powerful hand. "I am going to undertake an experiment that may endanger my life, Richard. I am going to make an experiment which, if successful, will mean in the future a healthier and far less frightened humanity."

"But if the experiment is so inimical to life, why can't you find somebody else to experiment on?" I asked anxiously. "Somebody who is not famous, who is not so much needed as you are."

The powerful chin expanded in width as he smiled grimly. "I am not afraid to do to myself what I would do to others," he replied gravely, and looked at me solemnly for a space. Then, alert again: "Besides, I doubt if anybody else would be able to do what I have in mind. In case anything should happen to me, Richard, you will take sole possession of this diary here"—he laid his hand on a thick black volume at his elbow—"and the remainder of my scientific apparatus, money, et cetera, will be disposed of according to my will. You understand that?"

"Quite, sir, but I don't like the way you're talking. I don't want to lose you!"

"You may not," he answered slowly. "I can't be sure," and I silently marveled at the cool way he deliberated his chances of surviving death. "In any case, sacrifice is always the keynote of scientific progress. To come to my point, Richard, I have for many years been very disgusted with the fact that all the human race—indeed every living organism—must waste a third of its life in sleep. Think what a race we'd be if we never slept!" His big eyes glowed strangely as he uttered the words.

I PONDERED on that. Certainly it was an unusual idea.

"Sleep and dreams are closely allied," he went on, clasping his hands and looking at me broodingly. "We waste half our lives because we cannot control the dreams of our sleeping selves; we do not understand what use to put them to. There is a something beyond sleep, Richard, that I am going to unearth. I am going to explore a dream!"

"That sounds like a fairy tale, sir," I ventured.

But he shook his great head. "Not a fairy tale, Richard—scientific fact. My aim is to find a way to end the need of sleep and to determine thoroughly what happens during that period when the brain or the will no longer controls the movements of the body. I do not believe, like Freud, that dreams are suppressed desires, nor do I altogether concur with the views of Fortnum-Roscoe. It is my own belief that dreams are the experiences of another character, allied maybe by some other dimension, with one's own three-dimensional consciousness. At will, or sometimes unbidden, these dream states—this other unknown self—controls the consciousness.

"Robert Louis Stevenson, the famous author, if you recollect, used to place himself in a condition of self-suggestion before he went to sleep. The resultant effects, dreams, were so vivid that many times they provided sequences in his books. You will find that fact in his book, 'Across the Plains,' Richard, if you are ever minded to read it. Very interesting. In other instances we have dreams occasioned by pure hypnotism, which are always more vivid than those of a more normal nature.

"Again, it seems to be the memory furthest from our waking thoughts, the one with the seemingly greatest gap from the mundane, that is the most vivid.* That is a mystery which interests me, Richard. Always, though, there is some reason for a dream—some of the reasons quite natural, but others entirely unexplained. Whence come these sleep figments? And why should it be necessary to sleep in order to bring them into being?

"I am confident that they are but the manifestations of some other

* Extract from Myers' "Human Personality."

self, a self that is a real entity and yet untouchable from our waking dimension. An entity that exists in our waking hours in the guise of something subconscious—by which we might explain such things as sixth sense, intuition, and so forth—and in sleep as a dream. Richard, I am going to find out for myself."

"Granting that you succeed, sir, how will this benefit the human race?" I asked.

"If the real source of a dream can be discovered, it can be uprooted or at least allayed in its intensity, and dreams and nightmares need no longer terrorize and impair the lives of some sleeping souls. A dream can, and does, kill at times. Again, I have solved how to stop sleep, without seeming injury, and if a continued spell of sleeplessness brings no untoward effects I hope in time to make a sleepless race. The only thing I fear is that my delving into the unknown may bring about my death. There again, Richard, we have the evidence of that something—intuition, premonition, call it what you will. I have a strange feeling that one cannot look into the gulf without being destroyed. Don't ask me why; I can't explain it. On the other hand, it is perhaps only my fancy," he added in a quiet voice, but his tone did not deceive me.

"You say you have solved how to stop sleep?" I asked.

"Yes; that was not so difficult. Sleep is, of course, brought about by the clogging of the brain with waste and impure products. The real root of the whole trouble is insufficient or used-up oxygen in the blood. This impure blood, on reaching the brain, brings about a deadening effect, and a condition very much akin to a false death is brought about.

"The chemical compound I used

to overcome the conditions contains two ingredients. One is the organic compound known as protein, pure protein, if I may use the term, altered and doctored by my own methods so that it makes up for the energy lost during the day's activities and gives a fresh supply of energy to the system. The other ingredient is my own discovery. It is a mineral substance, containing a high percentage of oxygen in a quasi gaseous form. This, when mixed with protein, produces a blue-looking liquid, and has the power of stopping all desire to sleep, without any consequent loss of mental power or nerve strain, as might be occasioned by a powerful drug or stimulant. I have called this stuff 'Veldoris.'

"It has an incredible fascination," he went on reminiscently. "Like opium or cocaine in its attraction. That's the only trouble. I have will enough to break my love for it—at present, but certainly something will have to be done to lessen its incredible potency before I offer it to the world. The weak-willed would very soon go under. Richard, you wouldn't think I hadn't slept for a week, would you? You wouldn't think I've been working day and night for that time?"

This came as a surprise to me. He looked as fresh and active as he had always done, and I unhesitatingly told him so.

"So you see, Richard, Veldoris works perfectly. So much for that. My next move is a trifle more complicated. It consists of being asleep—yet awake. I have invented a machine that throws beams of various colors and merges them into one another by a slowly rotating disk of different-colored glasses—a kind of vastly improved limelight

"Now colors, as you know, under

certain conditions, can produce various mental effects, if you allow your will to be governed by them. An insidious green will make you feel sick in time; a restful, hazy heliotrope will make you feel contented and drowsy; a glaring red will keep you wide awake and turn you feverish—and so on. But a combination of all the colors of the spectrum, so to speak, will produce hypnosis—self-hypnosis—if you gaze into the combination long enough. Just the same as sound rhythm can kill you or raise you to heights of sheer, ungovernable ecstasy.

"In sound—although this has nothing to do with my apparatus—your heart unconsciously keeps time with rhythm. If you allowed yourself to be so governed, an organ striking a very deep note—and gradually becoming slower and slower—could kill you. Your heart would stop. Hence the slowness of a funeral march—the ancients knew a thing or two, Richard! Hence also the gay swiftness of a dance band, that keeps your heart beating fast and makes you feel exhilarated. But I wander from my subject.

"To gaze concentratedly into the swirling mass of colors I have devised produces in time a waking sleep. To all intents and purposes the will ceases to be centralized in the brain; no longer does it control the limbs. What happens is that the body does go to sleep, and the controlling brain also, but that something in the mind, the subconscious, or whatever you care to call it, keeps awake, partly by the action of Veldoris, and partly by the color effects.

"Hence a dream becomes a waking reality, controlled entirely by the subconscious, brought from the normal hazy indefinability into sheer, concrete fact. Just like the som-

nambulist who walks along a cliff edge, yet whose controlling subconscious mind is fixed upon something in his dream—something light years away from his mundane position—which makes him quite unable to recognize his deadly danger. Hence, as the fear of his danger is removed, so is the danger itself no longer imminent to him. He comes back safely.

"Have you ever thought, Richard, how few sleepwalkers meet their deaths? Well, to-night I am going to explore a dream. If I succeed I shall return and try again and again until I have gathered enough information on the subject to find a way of ridding humanity of the plague of nightmares and so on. I shall communicate with you again in a week's time. If you do not hear anything from me by then, Richard, come and look for me of your own accord. Here is the key to the front door, in case Walmsley should not be in or anything similar happens."

He handed the key to me very solemnly. I was accustomed to his short dismissals and matter-of-fact way of ending a subject.

I left him shortly after that, much puzzled, and also worried lest I should lose him, for I loved him as a friend and counselor.

SIX DAYS of the specified week passed by, and I heard nothing from him. Then on the sixth night I had a dream, a dream of such astounding vividness, so clear, so lifelike, that I woke up with a violent start, shaking in every limb. Distinctly I had seen Dr. Veldor, strangely changed somehow, gesticulating and waving his arms at me from some faintly lighted darkness. I heard his voice—but that also was unaccountably different from his normal tones, as also was his manner. He was revil-

ing me, cursing me, screaming threats and abuses upon me. So awful was the force of his rage and anger, so menacing did he appear as he suddenly seemed to come toward me, I awoke.

I did not need anything to tell me that something was wrong. I threw on my clothes and tore downstairs into the hall of the house where I lodged. I had a questioning shout from my landlady and a dim vision of her—a round face topped with a nightcap peering round her door jamb in the light of a spitting candle—then I was out in the cold air of the London night. At full speed I streaked down the high roads, through alleyways and back streets, until at last, utterly breathless, I reached the doctor's home.

In another moment I had opened the door and passed into his study. The light was full on, and an open diary lay upon his desk with a smear of ink across it. Beyond, on the far side, another door was slightly ajar, with light streaming from it. I went toward it at a run and flung it open.

I recognized the place at once as the doctor's laboratory. Walmsley, a vaguely comical figure in his long dressing gown and nightcap, came toward me with a hopeless look on his round face.

"Thank God you've come, sir!" he breathed, clutching my sleeve. "I haven't known what to do for the good doctor these last few days. He hasn't been normal, sir. He's looked at me with burning eyes and muttered things about 'Veldoris' and suchlike. Just now I heard him shout, and I came downstairs right away, to find him like that, sir. He's—he's dead!" The servant's voice broke huskily.

"Dead!" I ejaculated sharply and strode forward.

I found the doctor sprawled at

full-length on a long bench, with a single small pillow. One arm was dangling over the side, and on the floor beneath his limp hand was a blue bottle with the one word 'Veldoris' written across it. It required no expert to realize that he was quite dead, and his death had evidently been a struggle, for his face was set in the most horrified, distorted expression I have ever seen. Above him was his beam instrument, extinguished.

I stood there in silence for a space, hardly knowing what to say or do. There were formalities to be gone through, of course. Then I found a letter, addressed to me propped against a chemical bottle. It contained a lot of things dear to me which I do not wish to reproduce, but the gist of it was that he absolved everybody from blame in connection with his death, and I would find the full story in his diary.

And that is all I have to tell for my own part. The remainder is Dr. Veldor's own story, pieced from incoherencies in places, but mainly consistent. I give it to the world as coming from the hand of a man who met his death trying to devise a means of ending the terrors of sleep, who tried to probe a little too far into the unknowable—the words of Dr. Veldor, who has since become known in the scientific world as "the man who never slept."

NOVEMBER 18TH. I kept my word to Richard and set to work the same night to explore the unknown region beyond the living world. I am writing this two days after. I was fully aware as I set my beam machine to work of the dangerous nature of the phenomenon with which I was tampering, but dangerous or otherwise nothing could be learned without trying. So, as on

a previous occasion, I took a full dose of the overpowering, insidious Veldoris and lay on the table directly beneath those swirling lights.

I am a man of pretty strong will, and I succeeded in eventually dissociating myself from bodily trammels. In some strange, indefinable way I knew I was no longer normally awake. My body was like lead. I could not fully comprehend what I was doing; yet I saw quite clearly that iridescent mist of hypnotic colors about me. In a manner, I suppose I was assimilated to a spiritualistic medium.

Then suddenly it seemed to me as though the beam machine had gone out. I was no longer lying flat on my back; instead I was standing in some place that seemed vaguely familiar. A little back street, dimly lighted by gas lamps, and at the end of it a shining gray expanse that I knew was the Thames River. I looked down at myself. I was in ragged clothing, and shivering with cold.

Quite suddenly I knew where I was. Almost twenty years ago I had stood in the same spot—a ragged, unwanted youth. It was when I had been turned out by my father and had been left to fight my own way in the world. But how in the name of wonder had I returned to this past point in time? While in my dream condition I could not understand, in any instance, how I reached the places I did.

How crystal-clear everything was! None of the vagueness of a dream! I took a step forward to investigate, then somewhere a window slammed through the night. I returned to the mundane beneath my lights and sat up, still shivering. A close inspection of the laboratory revealed that the heater was not functioning

properly and that the temperature was very low.

Further, close to where I had been lying on the table, a test tube had slipped out of its rack onto the bench close to my ear. The resultant noise must have been slight, but loud enough to supply the sound of the slamming window.

So, then, at my first effort I had discovered that dream took one back into a past time to an event of outstanding mental clearness, and that most of the occurrences fitted in by some unexplained freak with occurrences in the present.

I remembered, when I came to ponder, that at that point twenty years ago, a window had slammed, and I had been cold. Funny, then, that a falling test tube and a faulty radiator should produce the coinciding external results twenty years later. I thought of "mechanized" and "induced" dreams, and decided that the brain after all is responsive during dreams to external things. (*Or so Dr. Veldor believed at this period. R. F.*)

But that coincidence of events, and my travel backward in time, deeply impressed me. I decided to probe further.

NOVEMBER 19TH. I thought when I discovered Veldoris that I had done mankind a service—that I would be able to pass on to mankind a panacea for all the ills of sleep, and make mankind a thriving and industrious race. Now I have decided otherwise. It is not such joy after all to be deprived of sleep—never for a moment to feel relaxation, never to desire to slumber. This accursed Veldoris! It is deadly in its attraction.

I have tried to overcome its temptation, but it is too strong for me. I cannot do without it. I want sleep,

and I want Veldoris. I cannot have both, so I take the latter. I have just returned from a walk about London—a sleeping city. Almost everybody asleep save me. Everybody on earth can sleep save me! I have a growing horror of this wakefulness. I have decided to postpone my next effort until to-morrow night.

NOVEMBER 20TH. After my usual process of self-hypnosis I ultimately found myself standing on a bare and windy plain, with a gray sky that had a flush akin to twilight above me. There was no moon, no stars. I looked down at myself but failed to recognize my form. It was a peculiarly squat affair, with very short, amazingly thick legs, round powerful body, and tremendous hands and arms. An investigatory fingering of my face revealed a growth of thick hair. Where was I? What was I? I did not know. The present situation did not seem to fit in with anything I remembered. Even my body was different, and as before I could not, while undergoing the experience, remember anything outside it.

I went forward a few paces, then a remarkable thing happened. I found myself viewing two places simultaneously. Superimposed upon the barren, cheerless plain was Piccadilly Circus. It was daylight, and the seething flood of traffic was at its height. I stood looking upon it all, like an uncomprehending animal—stood looking at the plain, and London. I felt suspended between heaven and earth. Buses and people passed through me, yet I did not feel anything. What had taken place this time? I still had that repulsive body.

There was only one explanation.

I was in the fourth dimension—or some dimension or other.

(Be it understood that Dr. Veldor wrote his notes after his return, in the light of normal intelligence. In his form as a brute man he could neither have understood London nor a fourth dimension. R. F.)

By some unexplained paradox of time and space it was night where I was standing, yet daylight in the normal world. Imagine my amazement, when upon a boarding, I saw a placard which read: "Three More Days To See The Cattle Exhibition. It Finishes On The 24th June 1940!" 1940! Although I did not comprehend it then—although I could not even read then and have only my latent memory to describe it by—I know now that I was viewing a time ten years ahead of the present, and Heaven alone knows how many years in advance of the time when I stood on the barren plain. . . .

So the dream state did not necessarily take one into the past. Here was a future occurrence, which by some complexity of time relation to the mundane world I was permitted to view.

Then suddenly, out of the gray darkness of the mysterious plain on which I stood, there swept a black, shapeless thing that bore down upon me like an express train. I tried to move, but somehow felt powerless. My limbs refused to act. A blank and freezing terror was in my vitals. It did not hit me; it *absorbed* me!

I have a remembrance of struggling with a sudden return of muscular movement, of grappling desperately with that shapeless, abominable creation of an unknown dimension, of feeling it expand and contract beneath my clutch. Then I fell off the experimental table in my laboratory, to find the lights still

above me. I was perspiring freely, and my heart was beating furiously from the recollection of that frightful thing.

Again I have traced certain fundamental truths in my experiences. The creature I had struggled with was one of those awful things that occasionally come into a normal nightmare. The dreaded, impalpable something that expands and contracts and suffocates, until one awakes in a sweating, paralyzed terror. I have proved this seeming figment of imagination to be real! It does exist, in a dimension which I, too, had occupied at some point in my existence—at a point which perhaps all of us have at one time inhabited.

I have lived as a squat, peculiar man of little brain, with all the fears of a primitive man or ape. Long have I known that the "falling dream" is merely a recollection from apelike days, handed down, when one fell from a tree to destruction—the stark memory of which still lies in our innermost selves to startle us out of sleep. But I have discovered something new! More and more do I realize that dreams are not imaginative creations, but actual occurrences impressed upon the mind, handed down through the process of evolution, by procreation and heredity, across the gulf of endless time from body to body. It is a sober thought.

As to the superimposition of a future time in London, I can only explain it as being an "overlap" of the three-dimensional world, related by some paradox of higher mathematics in that moment of unknown past when I was in another dimension and inconceivably far back in the scale of evolution. One fact has become very manifest to me: It is that dream experiences cannot be gov-

erned to any particular point. Another point is that time, in the subconscious state, is merely a myth. It is haphazard and indeterminable.

NOVEMBER 21ST. I have made a remarkable discovery. To-day I have been working out my data on this subject, and I have discovered why it is that external conditions affect and coincide with subconscious dream states. There is a realm of what I will call force that exists between the conscious and subconscious states. Always, at the time of a dream, that dream occurs in relation to that force, which is related not indirectly to time, which latter cannot be altered. Everything, according to the laws of this force, duplicates itself in some form or other and links the mentality of the dreamer with the occurrences he is dreaming about.

Hence the coinciding moment of the slamming window and the cold. By predetermined calculation this force in relation to time had brought about the seeming coincidence which really, as I see it now, was mathematical immutability. The process of time had ordained these sounds, as inseparable from the subconscious mind, and nothing could, or ever will, alter it. My experience coinciding with the sounds was also predetermined. More than ever I realize that time is not only as we compute it with our material senses, but it is an endless something that also controls those other and stranger experiences of which I have written. Nothing is done without the dictates of time and force; hence, then, even an "induced" dream, where sounds are provided to coincide with the sleeper's dreams, is only a dictate of time and force. I appreciate clearly, also, that coincidence is becoming a useless

quantity. There is no such thing as coincidence. Perhaps you will ask what force is, then? To which I answer, nobody knows what force *is*—nowhere on earth will you find the explanation of what force *is*—only what it *does*.

Again, then, I shall venture into this unknown realm. Each time I learn something. My only worry is the increasing demand of this devilish Veldoris. If only it were not so potent, so irresistible!

(Later.) This time I have had an astounding experience, which proves beyond all doubt that dreams are indeed purely the "left-overs" of some former state of existence or consciousness. Following the hypnotic trance I came to myself in a drawing-room of extremely old-fashioned design. Men with long hair and bows upon it were about me. One was chafing my wrists and looking very soulfully into my eyes. The others were solicitous and attentive. An old-fashioned candelabra stood on the chenille-draped mantelshelf. But—I *was a woman*! I had no male conceptions whatever. All my emotions were those of a woman. I knew that I very much loved this dark-eyed youth who was chafing my wrists.

"You fainted, Adeline," he said in a soft, gentle voice. "Do you feel better? You must take care with that weak heart of yours, you know."

I got to my feet unsteadily and looked down at the neat, buckled shoe on my small foot. Again, I say, I had no conception then of being anything different from Adeline Laysen, a very-much-sought-after young beauty of the Victorian era. I had no conception of my own self—or at least the self of 1930. Actually, I was living then in what was myself.

I spent an evening playing the piano in that very old-fashioned drawing-room, then I complained once again of feeling queer. The lights, the candles, were swirling round. Somebody caught at me as I fell, and I have a distinct remembrance of hearing somebody shout: "Good Heaven, Marnot, she's dead!"

So I came back again. Try as I would I could not connect the haphazard events that occurred. But then, if that force of which I have written had predetermined everything, the events would occur in relation to the order of the force, not time. I might have the later events before the earlier ones—it all depended on the force relationship to my consciousness.

Looking back over my notes I have found a case where a woman has dreamed of being a drunken man, several times running, yet has never known such a person in real life, and has no idea what it is to be intoxicated.* Sufficient evidence surely that I am right in my opinion that dreams are but phases of life from *other* lives. Sometimes sweet and lovely; at others terrible and bizarre.*

I do not feel too happy to-night. Somehow I have a feeling that I am dabbling in things too deep for me—that I am violating some almighty law, which will sooner or later rise up and destroy me. Veldoris is still maintaining its grip upon me, but, strangely enough, I find now that I cannot sleep even when I make effort of will enough to keep away from Veldoris for a space. What is the matter with me? I have just looked in the mirror and I see that my face is old and weary. There are deep furrows round my mouth. It is the face of a drug addict.

* Myers' "Human Personality."

NOVEMBER 22ND. If I could only sleep! I am indeed paying the penalty for my fool curiosity. Either with Veldoris or without it, I cannot sleep, so I may as well have Veldoris and spare myself the effort of will power to keep away from it.

(Here was a gap, presumably of some hours, for the writing is resumed in a less steady hand. R. F.)

I cannot understand what has happened to me! Just now I went off into a hypnotic trance without Veldoris! The stuff is mastering me! I never know now when I shall be overcome. It happens without colored lights—without Veldoris—without any exertion on my part. I am becoming perpetually suspended between two worlds—between that mystery subconscious region and the mundane. Poor Walmsley! I think he is rather frightened of me—and well he might be! I am frightened of myself!

My dream experience this time was not pleasant. I merged into a world of utter blackness—black, that is, from a human standpoint. Yet I seemed to be possessed of some curious optical faculty. I saw heat and infra-red rays, and looked through rubber windows as though they were of glass. I read strange wording by the glow of a red-hot iron, and everything about me seemed as bright as day.

What strange dimension had I got into this time? Obviously a dimension where the eyesight was different to ours, where one could see heat and look through a solid. And through it all there lingered, somewhere forgotten yet most desired, a desire for sleep! If only I could sleep! My Heaven, why did I ever try such a fool experiment? Why did I ever attempt to delve into the unknown?

I vanished abruptly from my

world of heat into a dimension of utter incredibility. A world where oblongs and cubes mounted end on end and subdivided into long, incomprehensible-shapes vanishing in an inky sky, in which were set strange and brilliant stars. I have no idea what dimension or world it was. It faded almost instantly, and I awoke where I am now—sitting at my desk with my diary before me. I am becoming alarmed, yet some unknown power impels me on.

NOVEMBER 23RD. I have not long to live—not long to write down these words. Three times to-day I have fallen into that hypnotic state between worlds. Veldoris is all I crave; it has become my soul—my being. Yet I crave sleep still more. I must rest! My brain feels as though it will burst, so constant is the strain and stress being placed upon it. It is more than flesh and blood can stand.

I hope I am not a coward—but this is too much. You will find me dead, Richard, and, I hope, asleep in the gulf beyond. You will find a bottle near me which will have "Veldoris" written upon it. You will find the formula for Veldoris in my safe. Pledge me your solemn oath that you will destroy that formula the first thing you do. Try to stop vivid dreams by the aid of what few notes I have given you, but never try to stop sleep. Nature never intended that life should go on perpetually without a rest.

To-night I have again dropped into that dream world and have had a deadly experience. I have seen a world of flame. I have been forced toward a canyon of flame by barbs, with my hands tied behind me. I had a recognizable human form. But, Richard, you were the one who sent me to my doom—or I thought

you did. I have seen you upon a throne of some strange, glittering metal, watching my progress toward a furnace, a cleft of flame and death. And you watched with a merciless smile on your face.

Even in that consciousness your name was Richard. I shouted your name with all my power. I reviled you, not knowing you for what you are in my normal life—my dearest young friend.

I fell into that gulf of fire; perhaps I died and was reborn into another state of consciousness. I do not know. I remember only that I fell through the floor of the gulf of fire into a world that had no opacity, where I could see through the ground and where no solid seemed to block my body or vision. I got to my feet and walked forward steadily, until presently I came to a solid world again—found myself wandering in drear, unknown streets, a place which I now realize was London. Some strange force impelled me *through* a closed door, and I came to a figure lying asleep in bed.

In an instant I recognized you, not as I really know you, but as Richard the man who had condemned me to the flames. I became seized with a mad fury; I tried to strangle you, but my hands went through you. As I could not do you any physical injury I stood glaring down my hate upon you. I saw you writhe in your sleep. I cursed you for condemning me to the flames. Then suddenly you awoke.

At that instant something seemed to snap within me, and I found myself slowly recovering here before my desk—not refreshed, but more weary and hopeless than ever. I have written down these words; I feel somehow that you will come and find me. Don't think too hard of me, Richard. I have tried—and failed.

You have my record—and you will also find a letter which I wrote some days ago, in anticipation of this event.

Now I shall go into the laboratory and lie on that infernal table for the last time, for perhaps I shall now be able to sleep.

Sleep!

Next Month:

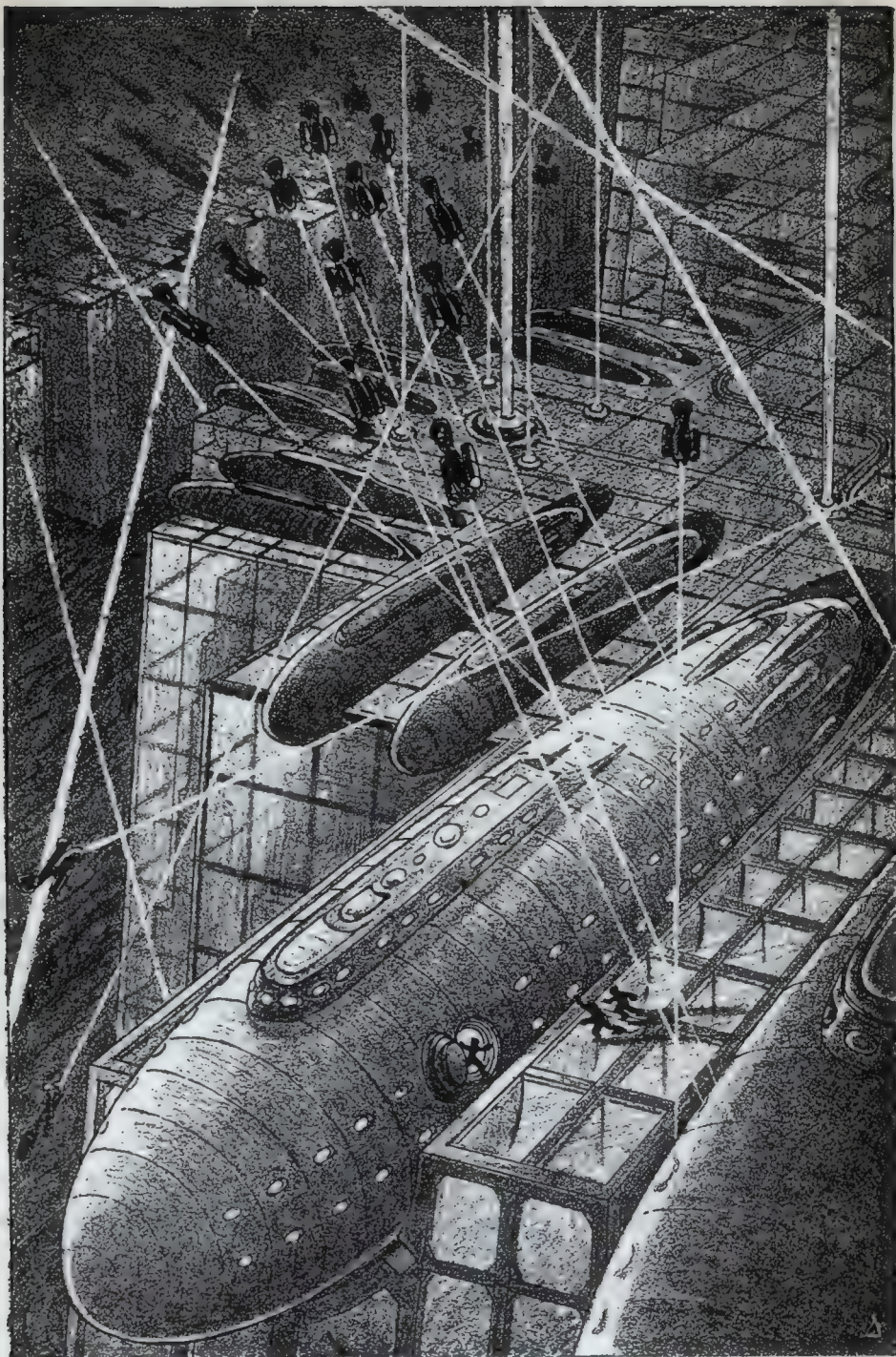
The most daringly different theory of the creation of the Solar System is conceived and propounded by

JOHN RUSSELL FEARN

IN

“BEFORE EARTH CAME”

The Thought-variant Novel in the
July ASTOUNDING STORIES



Deadly beams criss-crossed in the sky as the two ran for the lock.

*Illustrated by
Elliot Dold*

Crater 17, Near Tycho

*A tale of the space-ways, and an outlawed ship
fighting against the deadly problem of weight.*

by Frank K. Kelly

*City of New York, 2021 A. D. Riot
in Gotham Square.*

UP past the swinging sweep of the city's great roof a rocket roared, hung poised in mid-flight, and expanded in a murderous mushroom of spitting green fire. Then followed the thin whine of an alarm siren, rising to a grating scream, dying away again in soundless crescendo as the range of its vicious vibration passed beyond the ken of human hearing. Then against the murky back drop of the night sky, blue fan lights began to prick, circling low, just skimming the rounded shoulder of the mighty roof.

Blue glare and white beam criss-crossed; the white beam rebounded searingly across the torn blackness and vanished, closely followed by an explosive echo, as of thudding thunder. The blue fingers of the giants' hands that seemed to claw the heavens thickened in answer, pushed upward more ascending columns of deadly azure brilliance in whirling clusters of light. The motors of distant patrol planes thrummed in sudden swift surge, like the beating of ten thousand drums, like the hammering roar of sea surf rolling against rock cliffs.

Loud-speakers blared, catching up the heavy overtones of an old man's spoken voice, tossing the sound out in great waves of concentric vio-

lence that spread in widened rings of noise over the city. The voice almost reached through the miles of space that stretched between the confusion and the banked slip-cradles of the interplanetary freight docks, perched high on the edge of the huge roof.

Almost, but not quite. It faded to a dim mutter here, like a behemoth growling hoarsely to rebellious midgets, with the last words swallowed in a backwash of innumerable tiny sounds, that grew swiftly to the roaring of a rising mob—

The small man sitting beside Rafe Brand jerked around nervously on a pivoted seat, and shot a disturbed glance out through the narrow slit of transparent glassite before him. From here, in the check tower of the great freight dock, the broken surface of the roof swept away into dimness. Flood lights hammered down in steady glare, etching the gleaming tracks of monorail trucks against a white background of thick glassite. Freight ships, dark and deserted, hugged the snug embrace of slip-cradles all along the dock.

Only one vessel, and that the closest to the ungainly tripod of the check tower, was agleam with light. The scarred sides of the black hull still glowed with red heat, still crackling to the friction-stress of atmospheric passage. The name glittered in luminous green

letters: "Isis, Stellar Ship 946 RV, Cargo. Mars-Earth Cleared."

The check man shrugged and turned back to the clicking board in front of him. His swift hands played over the punch panel, keyed to the rising drone of his thin voice:

"176 tons, Earth Weight, beryllium. Mars checked, 943 kinolotts. Gravity loss, 1.43. Checked. Next way line—"

Brand leaned forward, bright eyes hiding the surge of feeling deep within him, head tensed to the sound and stir in the dim distance. He spoke in a husky voice: "What's breaking over there? Got the look of a first-class war."

"Maybe it is a war."

"I don't sniff the idea."

The other swung in his pivoted seat again. His eyes looked Brand over in swift appraisal; he saw a tall, solid space man, deeply colored by glare of sun and heat of stars, body corded with responsive muscles, dark fierce face topped by graying thatch of black hair. Stenciled across the tunic front of a shabby uniform were the words: "Freight Commander, Interstellar Corporation. License registered. Tape Spool 3876. Earth recorded."

AFTER a minute the check man said: "You been away some place for a while, haven't you?"

Brand made a little motion with one thick hand. "A while, yes. You could say that. A long time. I've been cargoing stuff for Interstellar the last eight years. Since I got my license."

"What channel you been work-in'?"

"Mars-Jupiter."

"Long jump."

"Yes."

"Just switch channels this trip?"

"Yes."

"Mind tellin' me your name?"

"The name's Brand—Rafe Brand."

The flat face of the check man relaxed. He nodded. "I got you. Mine's Garnet."

They touched hands.

"You asked me what was goin' on over there."

"I'd kind of like to know," Brand said.

"It's nothin' you could call new," the check man said. "Riot in Gotham Square."

Brand hesitated an instant, purposely not quite hiding the puzzled uncertainty he wanted to show in his eyes. The other leaned close, glanced once again around the narrow outlines of the check room, in a swift leaping jerk that took in everything.

"You look right to me, so I'll tell you something."

"Thanks," Brand said, allowing himself the edge of a smile.

"There's been a riot in Gotham Square every week for months. You oughta get the idea. It's the custom to give the Bottom Levels a chance to tell what they think about things, in a mass meeting called every seven days. Not that it means anything, of course. They talk, they do a lot of silly gassing—and the Controls shove the records of the meetin' away under a mountain of red tape. Nothing ever comes of it, see? The Controls just go ahead and do what they want."

Brand's face was very smooth and quiet, perfectly impassive. No muscle quivered to show that the man was telling him things he already knew. His head moved slowly.

"I believe I get you. A kind of safety valve. No meaning to the thing, the meeting, I mean—except to let off steam that might burst if

they sat on it too hard. Smart scheme."

"Just that," the check man said, and grinned; but the grin twisted his thin features in a bitter outline.

He watched Brand narrowly, almost with suspicion. He was sorry he had talked. Better not go too far, with this silent man from space. Didn't know who he was. Might be a Control. Couldn't tell him you had a son who'd got too much in the open during a riot in Gotham Square—and died, with the sour smell of an ion beam burning through his lungs. Better keep a tight mouth, keep it buttoned.

"Just that, smart scheme," the check man said again. "Only it hasn't worked out just as they figured it. The Levels have raised merry hell. They've forced the Controls to give them representation of one man in the upper council. To-night they say they've discovered their representative, Gagin, has sold them out."

"You mean——" Brand began, and paused. His lips laced tight, and he nodded. His mouth moved soundlessly, but the other caught the thin echo of muttered words: "The dirty piece of static space!"

"I call him the same thing," the cargo checker said, grinning.

Brand said: "Call him what?"

"Didn't you say something?"

"No."

"All right," the checker said, still grinning.

Brand stared as if he hadn't heard, his face blank and smooth again. The small man turned around, and began to work at the controls of the infra-penetrator. Brand watched, one half of his brain tuned to the meaning of the other's words with their undercurrent of quivering bitterness, the remaining half taut and strained, concentrated

on the dial readings of the infra's mechanism.

He jerked his body closer to the shut circuit of the control switch; if this check man was on his job, drove the searching infra-beam in through the thick stellite hull of the *Isis* to the aft hold, brought out in clear outline what lay there, that would then automatically be recorded in cargo files with photographic clearness.

It was Brand's unswerving resolve that the check beam would not sweep through the *Isis* again. Already it had gone once, half power, preliminary check—and come dangerously near to the secret of the cargo ship, deflected off the aft hold only by the smooth flow of the interference stream that had been set up there. But the dials had jumped and jerked, registering an obstruction, and only the sound and confusion in the distance had kept the checker's suspicion from speedily rousing. Hard thing, this was that he had to do. Hard to turn on this unsuspecting friendly man, drive the butt of his electronic pistol into the base of the thin neck, snap out the other's little life—but he could take no chances. There was more lying in the balance now than one little man's life.

THE CHECKER was speaking again nervously, eyes on the distant flurry of lights, his narrow body tensed to the flare and burst of police rockets, his thin ears tuned to the wail of screaming sirens.

Brand stiffened a little, leaning forward. "Think the Bottoms have any chance of winning?" he asked. The resolution was half formed in his mind to give the other a chance at longer life. If he spoke now against the Controls——

The small man hesitated, looking

at Brand queerly. "Not a chance in hell. No more chance than a space man with a smashed oxygen tank, two thousand miles off side his ship. The Control police will wipe them out."

"I think so myself," Brand agreed gravely and hid the tightening purpose in his eyes. The check man would have to die.

So the little man thought the Control police would wipe the Bottom Levels out with ion beams and paralytic gas, and fire shells smashing downward! Well, his mind might change if the penetrator drove through to the stacked cargo in the aft hold. Row on row of small stellite containers lay there. And inside them—odd-shaped things, harmless enough in look, deadly in sting: the coiled deadliness of the Martian sound oscillators. Hundreds of them, charged and ready.

Even the Controls wouldn't have a weapon that could stand against the Martian whirling death. Sound fields that dropped down in singing streams and ripped the atoms of matter apart, swung them wide in racking confusion. Oscillators tuned to the vibration level of human bodies, that could maim or kill at will.

Brand's eyes jumped to the smooth dial of the chronometer on the wall above the penetrator control board. One fifty-eight, Eastern terrestrial standard time. And Gar had said they would meet here at two.

Gar would have men, trusted and sworn to the cause of the Bottoms, to muster up the sparse ranks of his own space handlers, now waiting quietly in the central cabin of the *Isis*. Swift transfer of small heavy containers to purring mono-trucks, an interchange of instructions, and Gar would be gone with his cargo of death. And the *Isis*

would be swinging up again through silent space, roaring out past the city's roof to meet the curved arch of the black sky. There were men in the crater stations of the Moon, sickened of the tyranny of the Controls, eager for battle. The *Isis* would come back crowded.

Brand sent his glance past the shoulder of the cargo checker, through the glassite slit in the wall of the narrow room. He saw the gleaming ribbon of stellite that marked the path of a mono-car. One track was humming, swaying to the furious passage of a heavy body. He saw the coming car, glittering under the flood lights—a small, blunt-shaped object, shifting rapidly through the distance.

The check man was intent on his work and did not see. He was reaching out a thin hand for the control switch of the penetrator, his high voice beginning to drone: "All right, Brand. Preliminary check complete—"

His voice died, cut off in a sudden choking silence. Brand's hand rose once, fell hard, bronzed fingers wrapped about the thick hilt of his electronic pistol.

The little man stiffened, head lolling, the glaze of quick death creeping in behind his blank eyes. He dropped forward, limply crashing against the dull metal of his control panel.

Brand shoved the gun back inside his uniform in a quick flick of the wrist, then turned, stood just at the edge of the low doorway, shivering a little. Not easy to kill a man like that—take him from behind, without warning, without a chance to fight back. And yet any other way might have meant failure.

Failure for the millions under his feet, the Bottom Levels of a top-heavy civilization, the base of the

human pyramid. The millions deeply buried under tons of stellite and glassite, living and dying out of sight of the Sun and Moon, oblivious to the slow march of white stars in the purple pageantry of the night sky. Not to breathe clean air, nor see the Sun, the glory of it. Not to smell the warm odor of the Earth in spring, nor stiffen to the whining whiplash of winter winds. Not to be a part of the world's ancient heritage. All that was denied men, unless they were born in the circles of the upper councils, unless they were of the Controls—— Well, all of that was going to be changed.

The distant mono-car was coming fast, the rail shivering to the smash and flash of the speeding projectile. Suddenly Brand stiffened, stared with dark, incredulous eyes, his fists clenched at his sides. A sharp foreboding of disaster struck him—the car was too small to hold the men Gar had promised to bring. Then something had gone wrong.

II.

IT WAS CLOSE enough now for Brand to see the insignia stamped on one round gleaming side of the car: "One Man. For Freight Only." Something wrong! This must be Gar, coming to tell him——

It was. He knew that at first glimpse of the slight figure of the man below, that tumbled in wild haste out through the snapped-open door of the mono-car, and came panting up the narrow ladder of the check tower.

Terror was riding the man under him—beating a tattoo in the quick *spat-spat* of the running feet, the harsh, ragged murmur of the other's gasped breath. The dark head turned and looked up, caught the outline of Brand's body in the doorway.

"Rafe! You're here!"

"I'm here," Brand said slowly. "But your men—the men you promised you'd bring——"

"Gone, all gone! The fight I've had, making it out this far——"

Then Gar was there beside him, swaying a little, his grim face green and white under the cold impersonal glare of the roof flood lights. A red stream dribbled in a zigzag flow along the drawn skin of his jaw, cascaded down across the split lips. One arm of the dark man was hanging queerly at his side, swinging limp and useless.

"Steady!" Brand said quietly.

He caught the thin shoulders, held the other braced for an instant, let him catch lost breath. Then Gar straightened and nodded, and jerked away. The tight lips moved, formed into what was the shadow of a slow smile.

He said: "All right now. I can take it."

"Sure!" Brand said. "Sure, you can!"

He waited.

After a minute Gar said: "We've got to get away from this place. Got to go now. Before they finish us both. The *Isis* can take off again, any time?"

"Yes," Brand said.

Gar passed a trembling hand across a white face. "The riot started to-night in Gotham Square when——"

A picture leaped in Brand's mind at those few words. Gotham Square. Not a square at all, but a huge cavern in the depths of the Bottom Levels. Seats, ring on ring, tiered mountain-high. Packed with the thousands that were lucky enough to fight, steal, or beg a way in. Surrounded outside, in dimly lighted corridor, by the millions of the city canyons. A raised stage, with

microphones and amplifiers for the speakers. A jutting dais, the place of honor, for Gagin, honorable representative of the lower people in the Control councils.

Gar muttered: "It was awful! Massacre!"

And Brand said, quietly: "Better tell me what happened."

But some deep instinct in him told him that he already knew. Gar was talking again, in a high-pitched voice, words and sentences tumbling out through a nervous mouth in rapid flight, incoherent, breathless, yet somehow shaping a vision of chaotic pandemonium that had been.

The news had seeped through, down to the lowest levels of the city, to the half men who lived in almost complete blackness, that Gagin had sold his vote to the Controls. And this night Gagin was there to speak to his people.

Gagin was there. Pale-lipped and jerky-eyed, and with fear quivering in every line of his body—but there, under the fierce eyes of the crowd, which sat in thunderous silence, harshly staring. Others were on the platform, a few score of them, including Gar, a handful brave enough to mock the wrath of the Controls by setting themselves up as an advisory group to the Lower Levels.

Gagin made a speech. Not, Gar said, a speech really at all, but a muttered gibber, hideously distorted by the man's terror. The crowd had remained quietly through it all, until the finish; at the end there was a little silence—a terrible stillness in which no one moved or spoke.

Then the crowd went berserk. And Gar had gone along with them. Quick, light, swift-fingered, his hand had gone to the needle pistol at his belt, come up, flashed in a sputtering arc of flame, tearing into

Gagin's shuddering body. Behind Gagin a rocket flared, rising up past the mob in a flaring burst of scarlet glow: in the crowd there had been someone sent by the Controls. Sirens whined, wailing through the packed corridors of the canyons. Helicopters dropped from above, plummeting down through a widened opening in the city's roof, fire shells and ion arcs slamming in hot flight before them.

"I got away," Gar said softly, and shuddered under Brand's hard grip. "I got away. Came here. How—I've forgotten. I stole a mono-car, broke through that mob, got up on the roof——"

His voice died, came again in a great burst: "I killed Gagin. They'll get me, some way."

BRAND sought Gar's one good hand, crushed it in a long, slow pressure that spoke more than all the words he knew and gave evidence of all that came crowding to his tongue.

He spoke slowly: "You're sure no one saw you come across the roof—followed you?"

"I told you. I can't remember."

"I know," Brand said. "But you think—what?"

"I think they did," the other muttered, the words flat and dead.

His eyes were on a spot beyond Brand's shoulders; his glance swept out to the dark sky. Lights stirred and whirled in that sky, shifted with the purring hum of helicopter motors; white beams stabbed down across the roof.

"They're coming now."

Brand stood up straight and faced the scarred hull of the *Isis*. "Then we'll fight with what we've got, old son—and go down battling."

The other's bloody hands went up to his face. "No. Rafe, don't you

understand? That's why—I killed Gagin."

"What do you mean?" Brand demanded.

"I believed in him, told him what we were going to do. I told him about the oscillators, about you. And he carried it all to the Controls, let you walk into this. This is the trap they set for you."

Brand struck his fists together. "They don't know what they're walking into. We'll do what we can—with the oscillators. We'll take some of them with us when we go out."

"Even that," Gar said numbly, "we can't do. The alloy. The X stellanium isotope in the coils isn't——"

"You mean—it's not there?" Brand said. He stood stunned. Gar muttered: "I mean that. It's not there."

Brand fought the rising surge of despair that swept up in his throat, choking him. He stirred, whirling on the other. "For all that, Gar, we've still a way left clear. The *Isis* is space-ready. If they try a blockade, we'll break through."

Hope wakened in the slight man's dark eyes. He hesitated an instant, as if considering. Then:

"You're right! We'll take the *Isis* and hit out for the Moon. The Controls haven't taken over the crater stations yet. I didn't have time to spill that to Gagin. Rafe, if we could do it——"

"No time to talk now," Brand said swiftly. He was standing on the first rung of the check-tower ladder. "Down with you. Varney's standing by. He expects to pick us up—but not for the reason we've got now. We were waiting here to unload the oscillators."

"I know."

Gar nodded, and followed him

down the ladder, swung across the smooth floor of the great roof, moved up the rising ramp that led to the cargo ship's debarking cradle. Brand flashed the signal. The huge gimbaled door of the airlock began to swing on balanced pivots, turn inward, give a glimpse of the lighted interior of the freight vessel.

The lock stood open. Dan Varney, Brand's tall second in command, halted in the glow of light from the doorway, staring. Brand swung an arm behind Gar's shoulders, helped the other up across the lock, into the control room of the *Isis*.

He jerked round on Varney. "We've got to get action, Dan. Bad break. Gagin sold out to the Controls. Gar, here, came to warn us. Police fleet overhead. Get the lock closed and take us upstairs."

"Blockaded above?" Varney asked slowly.

"Don't think so, but might be."

"If we are?"

"Break through. Use forward ram."

"We're going out of the atmosphere?" Varney asked quietly, his hard brown face unchanged and impassive. If he felt any amazement at this sudden turn of things, he didn't show it.

Brand hesitated an instant, not looking at Gar. "How are we on space supplies?"

Varney shrugged, drawled: "Fair. Might make it."

Brand flung his voice out in a sudden burst: "Then hit for the Moon."

"Where on the Moon?"

"We'll base at crater 17, at the edge of Tycho."

VARNEY gave a flicking gesture that was as much of a salute as Brand ever received from him, and

turned, swung across the close, metal-walled room to the handling set-up of the freight ship. Giant Donlin sun engines began to turn over, build up pressure for the huge backlash of energy that would stream out behind and send the *Isis* hell-driving up through open space. Light glowed on the small face screens of the ship's individual visa plates and died again as Varney finished giving orders to each member of the ship's crew.

Brand walked straight to the big televise panel at the side of the air-lock, dropped into the comfortable bucket seat before it, shifted directive dials. The scene above and outside the freighter showed in sharp, clear outline—the silent check tower, with the crumpled body of the check man dimly visible, dangling limply over the top rung of the descending ladder; the pale ribbon of the mono-track, stretching away to nowhere; the flood lights hurling down showers of cold glare.

And above in the distance, contrasts in the black mirror of the sky, heliships were drumming on in massed flight, white beams flashing nervous fingers out before them. They were close now, closer than they had been when Gar and Brand had fled down the check-tower ladder. Even through the thick sound-insulated hull of the ship the roar of packed motors came rumbling. The crackling crash of ion beams searing through shuddering air smashed against Brand's eardrums.

He swung on Varney. "Got any pressure?"

"Pressure building," Varney snapped laconically.

Brand looked at Gar, still standing dazedly by the closed panel of the lock. "Strap yourself in there," Brand ordered, pointing to the

curved outline of a chair equipped with acceleration compensators.

The other obeyed quietly.

Brand gave the "General Attention" buzz on the ship's communicating web, spoke crisply to unseen men standing by in compressor rooms and firing chambers:

"Give me pressure. And remember we're not taking off easy. That's all. Emergency stations."

"Pressure, sir!" Varney roared from across the room.

Brand tersely nodded. "Shoot it through, all channels!"

"Everything we've got?"

"Everything we've got!"

Varney's heavy fingers danced over the gleaming studs of the control board. A split second of no response—then roaring speed, coming into action. Plumes of repulsion streams stood out in long peacock fantails behind the exhaust nozzles of the thundering ship. Brand watched sky and roof and distant stars go whirling by in glittering confusion. Then it was over. The *Isis* zoomed through the Earth's atmosphere, crashing through screaming air, scarred sides red-hot with friction stress.

"Below!" Brand yelled in triumph. "Look below!"

Gar followed his eyes. Below and behind massed helicopters fluttered in baffled rage, stabbing out hot fingers in blue beams of swift force that almost touched and scorched the speeding freighter—almost, but not quite. The *Isis* was gone before the beams crossed in liquid fire.

Gar lay limp in his seat, crumpled under the crushing shock of sudden acceleration piled on top of his already weakened body. Brand got up, went to him across a firm floor held stead by gravity grids under stellite plates, made a swift examination.

Gar was knocked out. Brand picked him up gently, carried him past the visa screen and through a narrow door, into the officers' sleeping cabins. Then Gar was taken into Brand's own room, after the freight captain had finished some rough, quick surgery. A broken arm and a sore jaw—nothing too deeply hurt for repair.

Varney was waiting for Brand when he came out and closed the door.

The other faced him with grave thin eyes. "What happened, back there?"

The captain told him, in brief, sharp strokes that drove it home. When he was finished Varney said in a soft voice:

"This doesn't mean anything—after what he did on Earth—but it's something we've got to figure on, Brand. We weren't counting on an extra man for this trip."

"No," Brand said slowly; "you're right, there. We weren't. And we were expecting to pick up some stuff to carry us back over from Gar's end of the line."

He was silent an instant, meeting Varney's eloquent eyes. "We'll go easy, understand? We'll stretch what we've got, both ways from the middle. We can make it go a long way."

"Sure!" the other said, very low. "Well, it might last—— But if it doesn't?"

"If it doesn't," Brand answered, looking straight at him, "one of us will have to—drop out."

III.

THEY BOTH KNEW what that meant. Varney jerked a little, then straightened, his face falling into set lines. It took—nerve. Yes; you needed nerve to take your last look on the bright face of life and say

good-by deliberately to all life meant. You stripped, made the slow walk to the emergency lock—and then were shot spinning out into the frozen blankness of interstellar vacuity. There were a few men brave enough to do that—if it meant a chance for a better life to millions; if it meant that there would be some left to—well, carry on, to fight again.

"Right," Varney said gently; "I see what you mean."

They fell silent after that. There wasn't much more to say. Hours swung past, measured out by the ceaseless click of the little chronometer in the wall; hours, counting by Earth time—nothing at all, here in space.

The Earth, that had been concave, now changed, melted first into an indistinct outline obscured by clouds, then assumed the round convex bulge of a great ball slightly flattened at the ends and bulging in the middle. Varney kept sending the pick-up beam of the televisor back through infinity to the bright Earth, fingering out to contact the first distant shimmer of movement in the void space behind them—movement that might indicate the coming of the Controls' ships in dogged pursuit of the freighter. Nothing stirred. All quiet. The freighter drove on through nothingness, engines thrumming, compressors sobbing and groaning under the hard load of top speed.

Figures changed and multiplied in Varney's cold brain. Calculations, integrations, all the abstruse formulæ of space-time navigation. The *Isis* could do one thousand Earth miles per hour, with maximum freight load. One thousand! And the light ships of the Controls could make three with ease.

They had no chance—unless there was a long delay and the freighter took too big a lead. Even then, if they were carrying an overload of one man——

They took alternate watches. First Varney for eight hours, Earth-recorded; then Brand; then Gar, sore from his bruises, his battered head still topped by a white crown of bandage. Eight hours each they spent strapped into the control seat, eyes taut on the winking panels of the great directing board, fingers and hands busy at switches and studs. Eight hours free they had, to study the televisive screen, to talk, to drop down the engine-room ladder to the compression chambers and firing compartments, to think. That was the worst—thinking. But they had eight hours' sleep; and, sleeping, sometimes they forgot——

Brand touched Varney lightly on the shoulder in the middle of the third day, nodded, and took over. The tall man stood up lithely, muscles stretched, grave face relaxing in a long yawn.

Brand sat down, swung the revolving dials, tensed his eyes for a first glimpse of the white Moon on the lookout plate just above the control board. Crater 17, near Tycho. That was refuge. If they got there, they were through untouched. The Controls might know they were on the Moon, might make an effort at finding them, might savagely search; but the Moon wasn't mapped and zoned and guarded as the Earth; there were wild places untapped by the visa beams of the Council patrols. Crater 17, near Tycho——

Varney spoke in a low voice from behind Brand, startling him. The tall man was staring at the complacent face of the chronometer. "More than two days, Brand. And no sign of their coming after us. I

actually think—I actually believe we're going to make it."

Brand nodded slowly. "Yes. We've held even at about one thousand per, all the way from atmosphere. Thirty-six thousand miles—gone. And still we're not yet close to the Moon—if the patrols come out here, hunting us——"

Varney rubbed a hand slowly across his lips. "I know. But we've been lucky. Maybe the luck will stay with us. Air's holding out. Food's lasting. The men aren't grumbling any more than usual. We've even a little water to spare, now that I changed the set-up in those condenser coils."

"Yes," Brand said again.

Varney noticed how drawn the other's face looked in the faint light of the control room. They had cut down on the juice that fed the cold globes, even though that was so little, to save power for the recoil streams.

Brand took his eyes from the unchanging glimmer of the directing board; he shot a glance across at the closed door leading to the sleeping cabins. Gar was off watch and asleep.

"Varney, get this. And tell me what you think. But quietly. We don't want to let Gar know until we have to, if what I've noticed is true. And it is true. The air's not holding. It's going bad. You've sensed that?"

Varney exclaimed sharply. His face whitened; he shuddered a little. Then he caught a grip on himself. He could be as big as Brand. Yes.

HE TOOK a heavy breath, drew a long draft of the ship's air into his lungs, and it made him sick. It was acrid, sour, with a rank staleness that spoke of its being used

over and over again—passing through many men's bodies, expelling itself in a burst of lung effort, emerging charged with carbonic gas. Building up its percentage of that stifling gas, until it could be used no longer. Slow death would follow then, death by smothering, by suffocation—unless the air was changed, cleansed, made fresh again by the oxygen compensators.

Varney came to a sudden full realization of what a delicately balanced mechanism this ship was. Like most space handlers, he had taken it all for granted; it worked, because it was made to work. Well, maybe in a few more years men would be laughing at the crudities and inefficiencies of these hard-shelled monsters of thick stellite; maybe! He knew they would be, some day in the future. But not now. It was still new, this going out into space in a precarious bubble of welded metal, pushed forward through a void by forces little understood even by those who used them. Men had many things yet to learn about the space between the worlds.

Ships had conquered it, driven out across nothingness even from planet to planet, carrying men in numbers, loaded with what man called useful machines and weapons and supplies, complex mechanisms that made life livable in the roofed craters of the Moon, even on Mars.

But there were ships always being lost. Ships that got out of touch with beam-communication stations and drifted from known channels into some unknown limbo of forgotten space—and never came back to tell what they found there. Ships that broke down in mid-voyage and hung helpless between the pale planets, circling like small new worlds, starved satellites, until the men

within them went mad and destroyed themselves—or fell back in a long dive against the hard face of a mocking Earth.

There was a balance that must be held in every ship, no matter the cost. Varney remembered reading of the first primitive submarines that cruised Earth's waters. It had been like this, underseas. So much air; so much space to move around in; so much food; so much to drink. It was that way here, in the void—a balance of interdependent factors; a balance nicely calculated between the crew number and the air used and the food consumed and the water absorbed. That was on one side of the equation; and on the other, the storage supplies and the power built up to carry the ship from world to world.

Something clicked in his mind, like the separate pieces of a picture puzzle falling together into one whole. There were eight in the crew. Counting himself and Brand, the ship carried ten. It was built to carry ten. No more. But they had Gar now. One man always left over. One too many. That left the equation uneven. It destroyed the balance—

He faced Brand, eyes smoothed out, hiding what he felt. He said slowly: "I'll have a look at the compensators. If we can pull a little more oxygen out of them—"

Brand nodded, a little more briskly, displaying a faint hope. "Even if we've got to cut down on what goes into the recoils, we'll have to do that. We can't live out here with no air."

Varney jerked a hand in brief salute and was gone down the ladder to the machine room. He picked his way carefully along the metal plate of the catwalk, cautious not to put his feet down outside the

laced grids of the protective flooring. Gravity compensation had been blocked off outside those grids—saving power.

He stopped slowly, stood facing the compact mechanism of the oxygen compensators, a quick glance jerking up along a narrow row of dials to a curving cylinder of transparent glassite. A warm opalescent fluid gently stirred against the bottom of the gleaming cylinder.

Varney's lips tightened; he bent down, touched the controls of the indicators. Looked up again. Waited for the response.

None came. The compensator was dead.

A LONG TIME he stood there staring, his lungs struggling in the thick atmosphere of the aft section of the ship, his eyes beginning to smart from the effects of the rancid air. His vision was not as good as it had been; objects a little distance away he saw as through a slowly descending curtain of fog.

He raised his hands and looked at them. They were cold. His blood circulated sluggishly. He felt an uncomfortable weariness in his legs and arms.

Something stirred in hesitant movement behind him. He turned indifferently; the action roused him a little. His mouth went angrily taut. It was one of the firing crew; a thin, small man with a huge head and slitted flickering eyes.

Varney said: "What's this? What're you doing this far forward?"

As he spoke he shifted his body slowly, to hide the indicators of the air restorer, but the quick glance of the little man was there before him.

The other said in a thick voice: "I come to find out about the air. We're finding it hard, back aft. You

got to shift a little power from the compressors. If you don't——"

Varney's frown tightened as he recognized the man. "Jorgensen! You don't mean—mutiny?"

Jorgensen shrugged. The pointed little eyes met Varney's confused glance. "I ain't said that, sir. But we're all a-havin' trouble with the breathin', and we can't think none too good. We got to have better air, or we ain't gonna be able to hold pressure."

Varney relaxed and nodded. He moved aside, giving the other a clear view of the needle readings on the compensator dials. "Then take a look at this thing, and you'll see the reason we've all been having trouble."

The little man barely glanced at the squat mechanism. Dropping his eyes, Jorgensen said: "Beginnin' with what you spoke last, sir, I think that ain't the reason for our trouble."

"No?" Varney asked harshly. "Then what is?"

"We've got one man too many aboard here."

The chief officer looked at the other in a sudden burst of scorn. "You mean you're not willing to take a little bad medicine with the rest of us—you're looking around for a Jonah already?"

The smaller man said in a low voice: "Puttin' it to you plain, sir, one of us has got to drop out through the E lock of this ship. When that's done, we'll be right again, and we won't have no more trouble."

"I see," Varney said softly. "So it's that simple?"

"Yes, sir."

"Who would you like to be the hero?"

The little man looked up, his eyes hitting Varney in the face. "We're

every one of us aft ready to take our chances with the rest of your forward group, sir. If the captain asked for volunteers, I'd offer to go myself."

"I really think you would," Varney muttered.

"Yes, sir."

Varney saw that he meant it. His face was steady and still, and the sharp little eyes glinted in it like points of unchanging stellite.

Varney straightened back his own shoulders. "I'll speak to the captain."

"Yes, sir."

"Now about the compensator. Think you can fix it?"

"No, sir."

Varney stared at the set face. "Sure of that?" he asked quietly.

"If you want it straight, sir—there's nothing to be done about the compensator."

"Hopeless," Varney muttered, as if to himself.

"Yes, sir. The bottom coils are burned out."

"I understand," Varney said softly. "Return aft. I'll send for you, all of you back there, when the captain is ready to make his decision."

"Right, sir," the other said.

He had vanished before Varney could speak again, his slim body jerking in between the clicking mechanisms that filled the long room. At the far end of the catwalk a door opened for an instant; the lurid light from a compressor chamber flared out in a circular spot of flickering glare, then was gone.

Varney swung, on legs a little bit unsteady, and returned along the narrow metal path, following its windings back to the base of the flat, straight ladder leading up into the control cabin. He climbed the ladder very slowly.

AST-6

IV.

BRAND was doing something at the control board, shoulders bent, face and head hidden and savagely absorbed, fingers pulsating over shifted studs. Varney walked up quietly behind him, touched his arm.

Brand jerked round like a cat, his eyes flaming. "What the hell!"

For an instant he didn't seem to recognize Varney, didn't seem to know where he was. Then he said: "You didn't change the set-up on those compensators this quick?"

"No," Varney said.

Brand flared: "Then what are you doing back here?"

Varney waited a little and then answered: "There wasn't any use changing the set-up, chief."

"Why?" Brand demanded.

"It wouldn't do any good. The lower-coil system is gone, burned out, trying to carry a constant overload. Oxygen's not getting through now, at all. No good trying to do anything with a break like that."

There was a change then in the way Brand looked, so deep and indefinable that it was only partly reflected on the surface of his eyes. He just looked a little more tired, his eyes went back a little deeper in his head, and his lips closed tight—that was all, but when it all was added up it made a big change.

"I thought we were due for something nice about now," Varney said; he grinned. The grin was unpleasant to look at.

"I've got a cute surprise, too," Brand said. "A swell thing I'm going to spring on you. But I think I'll wait till I hear what else you've got to say. You've got something else, haven't you?"

Varney nodded. "Yes. Yes; I have."

He stopped as if something held his voice. Then words came to him again, flat and strained: "I met Jorgensen, looking over the compensator. The men know about the air. They're having a bad time of it aft. They're asking you to——"

"Of course," Brand said, holding his face still. "They're crying because we're carrying just one man too many. And they want me to ask somebody to walk out and leave the party, so there'll be more fun for those of us who are left. Am I right?"

"You're right," Varney answered.

Brand knew there wasn't much to talk about now. Now it was in the open, and they all had to stand up and face it. Face it—face what? To go out alone into space. To be stripped, fitted into the emergency lock, and shot projectilelike into indifferent infinity. That took a little bit of nerve.

Brand raised his head. "Now let me show you what I've got for you," he said. "In some ways, it's a better joke than what you brought me. Look there."

Varney stared at the scintillant screen. He saw what was shown on that glimmering bright surface, but his mind didn't really take it in. He knew it was there, the screen didn't lie, it was just a clever mirror to show whatever came within range of its activating beam—yet he didn't believe the message of his own eyes.

But it was true, all right. On the screen lay the clustered glitter of a Control space fleet, driving out from the spurned Earth directly in the path of the fleeing *Isis*. Speed and power and grace and gray, gleaming bodies, swiftly overhauling the slow freighter. And the air in this ship fast going! No; not going, either; the joke was bigger than that—the

air was being poisoned by the workings of their own lungs.

Varney laughed.

"Don't do that," Brand said, shuddering.

"Sorry!" Varney jerked. He glanced down at his hands. "You were right. This is a better joke than any I know. Let me go first. I'll do it gladly."

BRAND sat a little while in silence, looking at Varney. Then he unstrapped himself quietly, locked home the automatic controls of the freighter and came over to where Varney stood. He held out one hand slowly. "I've believed in you, friend, and I haven't been wrong. But you're not going. Shake hands with me once, will you?"

Their fingers locked, broke, and parted.

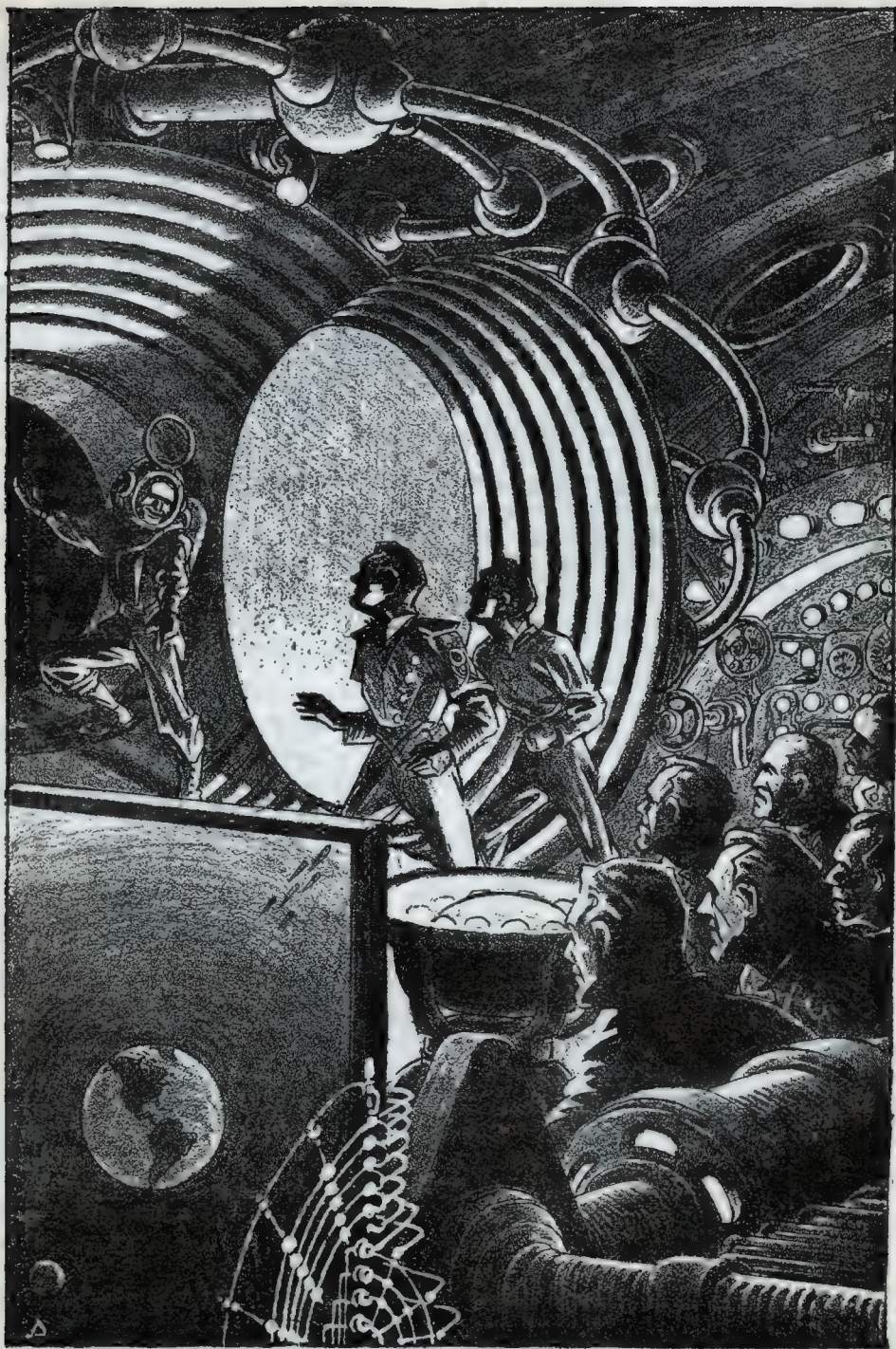
Varney said: "I'm the one to do this dance, chief. Who's better fitted for the job?"

"I am," Brand said heavily.

Varney shook his head. "You? Not you! You'll be needed, to break the Controls, as some day they're going to be broken. When we finish what we started out to do this time. Gar? He's needed, on Earth. Sometime soon he'll be able to go back, and he'll lead his people. He's got the brain and the force and the power to lead them, and when the hour comes they must be led. Now for me, I'm ready to take on anything. I've got nothing behind me that I'd care to cling to; and nothing I can see just ahead that would be worth more than my chance to do this. You know—I've wondered, now and then, how it would really feel to step out there in the great open places—alone."

Brand said, savagely: "Very pretty, but all wrong."

"Why all wrong?"



He said to them: "This is a great thing that I'm doing, isn't it?" Brand didn't answer—

"Dead wrong," Brand said. "You're our navigator. Forgotten that?"

"You can navigate," Varney said, and he laughed a little. "Forgotten that?"

"I can navigate," Brand said, "but not the way you can. With you, the ship has a double chance to pull through. To get to Tycho with Gar and the men and keep the fight going. That's all any of us can ask."

"Yes; you're right," a slow voice spoke close to Brand's ear.

Brand looked startled, glanced at Varney, but Varney had not spoken. The door of the sleeping cabin was standing open, and Gar had come into the control room. He stopped, his head upright between his straight shoulders, his eyes watching them with faint irony. "This thing seems to be up to me," he said quietly.

"No!" Brand cried, his voice coming out of him in a protesting explosion.

Varney muttered something.

"Look, all the pieces fall in," Gar said, as if he hadn't heard either of them. "We'd have got away, clean, if you hadn't pick me up back at New York, Rafe. If I'd just warned you, and then ducked back underground, the ship would have gone straight through to Tycho, and no trouble. Now—well, we're pretty close to being finished—unless something changes. If we tried to fight it out, with the air getting bad and one man extra aboard, we'd get wiped from space. No heroics in this at all. There shouldn't be, if we all think straight. I'd like to go right now. No use in standing around and waiting until it's too late to do any good."

Varney and Brand stood silently looking at each other. When it had been thrown down in front of

them like that, they both knew that Gar was right, that was the truth. There was no finding any way around it.

But Varney jerked his hand out in a little gesture and talked: "You've both left out something. The crew's in this. They're all Bottom Level men. It's their cause as much as ours. We've no right to deny them a chance to say what they think about it. And Jorgensen had the right idea. We'll use it, with variations. We'll call for volunteers—and vote on the men who want to step out for the good of the rest of us. The man who's found least valuable to the ship—he goes."

Gar hesitated. Then he nodded, looked at Brand. "It sounds fair enough to me."

"Yes; it's fair enough," Brand muttered. "All right; we'll do it that way. Call them forward, Varney."

THE TALL MAN stepped to the ship's communicating tube and gave the "General Attention" signal. Response came back swiftly in quick bursts of words from rapid voices.

The men trickled forward slowly in ones and twos. They lined up opposite Brand and Varney. "Big Lan" Margot, the chief compressor technician, boss of the bunch, with his shambling walk and hesitant grin, flashing like a gleam of light over his heavy dark face. De Celle, the French Earthman, thin and quick and sharp, like a polished rapier bending and straightening and casting off sparks of direct glow. Su Gan, the small Moon native, half terrestrial in his parentage, and showing the best alchemy of mixed blood—a little man, fast on curved feet, eager to please, glad to work, with a birdlike glitter in round eyes. Eight of them, filing in, crowding

the small room, standing uneasily against the wall, wedged in between the control board and the televiser panel, staring with grimy, uncertain faces at the glimmering cluster of reflected glow shown on the screen.

Jorgensen came in last, moving up the machine-room ladder with slow deliberation. He took his place near the televiser, his thin-eyed glance tightly focusing on Brand's body.

Brand faced them. "Jorgensen's told you by now what we're stacked against. I'm not wasting words with you. You're men, not children. You've got nerve or you wouldn't be here. You knew you'd have to fight when you came on this voyage. What I've got to offer is fair to all of us, from myself to Jorgensen."

Jorgensen nodded, suddenly spoke: "You're going to ask for a man with nerve enough to go out through the E lock, aren't you, sir?"

Brand hit him with direct eyes. "That's what I was trying to say. I'd like any of you who, of your own will, are ready to go out through the emergency port—to take one step toward me."

Margot shuffled forward. De Celle was a unit with him, in a quick skipping jump. Su Gan sidled across the smooth floor on lithe feet. Jorgensen walked even with them, still using that slow deliberation in the way he carried his body, as if he held a sense of successful purpose exulting within him.

Brand looked them all over again. Every man of the crew stood in an even line stretching across the silent room. Brand felt his eyes smart with moisture, and it was not all due to the bad air.

His voice snapped hoarsely: "I'd counted on this. That makes all of us, myself and Varney and Gar having already decided, who are willing

to step out—for the good of the ship. We've hit upon this idea to settle it: we'll take a vote, and the man voted least valuable to the cause as a man and as a leader—will go. You agree?"

"There's no need for that," Jorgensen said softly. He took another step toward Brand; and then, turning, he swung on the men who remained in line.

"We don't have too much time," Jorgensen said with composure. "No good wastin' part of it takin' a vote. It's me that's dropping out through the lock."

THERE WAS a period of silence. None of the men objected. A slow smile twisted the little man's lips, as if he was watching himself from a point of observance in the far distance; listening to the faint irony of his words, and laughing without bitterness at his fine play acting. Only it was not play acting. It was real. Little Jorgensen was going out through the side port—for the good of the ship.

Varney put his eyes on the small man's silent face. "You want to do it that badly?"

"I've read stories from the recording spools on Earth," Jorgensen said, "and I'm trying to prove you don't have to be big to be a hero. I want to know what the taste of glory is like to have in your mouth."

Gar moved as if in protest, and Brand's eyes tightened in narrow lines, but Varney went to Jorgensen and they began working together coolly. With quick leaping jerks of his long hands over his body the small man was stripping himself, sliding into the cool embrace of a metal-armored space suit, then motioning to Varney to get at the mechanism of the emergency lock.

Finally he stood at the edge of the inner panel of the port, the face plate of the suit opened for the entrance of death. He turned his eyes once around the room, stopping his glance on Brand and Gar. He laughed a little, the sound echoing hollowly from within his clumsy suit.

He called over to them: "This is a great thing I'm doing, isn't it?"

Brand didn't answer.

But Varney grinned. "Yes; you'll be a hero of the cause."

"After I'm dead," Jorgensen agreed and laughed.

"After you're dead."

None of them heard what Jorgensen said next, except Varney. Varney wasn't sure he heard it, either. But he thought Jorgensen whispered:

"I'm glad to do this thing. You know, it's only right I should be doing it—I'm really a Bottom Level man——"

Then Jorgensen took a big breath and said quickly: "Never think it wasn't worth it, will you? All right, I'm ready."

Varney spun the dials feverishly, his damp hands slipping on the knobs of smooth metal.

Brand came out of his daze, ran across the room, shouting in protest: "Can't let him do this! No, stop——"

He was at the lock, pushed Varney away, Gar following close behind. Varney stood staring at both of them, something sardonic in the twist of his thin mouth.

"You're a little bit late to stop the party," Varney said. "He just passed out."

V.

ABOVE THE SOUND of Varney's cold laughter, they heard the swift puff and burst of outward

leaping air, as the outer lock panel opened to Jorgensen's body. And after that—well, after that, no sound got through from the void into the control room.

"He had what you might call—insides," Varney said heavily. "He stepped right into it."

Gar was staring at the small look-out plate over the control board. His hand jerked around in a queer circling gesture. "Come here, Rafe. You can see—what's left of him."

Brand came and stood beside Gar, and they strained their eyes together. Closely watching, they both saw it—the small armored body, still spinning behind the ship, turning over and over with the force of the outrushing air not yet spent. Some vagrant gleam of light, traveling aimlessly from Moon or stars or Sun, struck the metal suit, glittered brightly for an instant, showed them a vision of Jorgensen's face, tucked inside the helmet.

He had left the face plate open, as they remembered. His eyes, bigger than they had been in life, as if death had been astounding, were shut, tightly closed by covering lids, as if at the final instant he had been unwilling to look out at the void into which he was mercilessly driven—but there was no fear frozen into the calm lineaments of the fading face.

There was something scarlet around his lips and eyes, like the red fringe around a Spanish shawl—blood it must have been, from burst vessels and ruptured veins, wrenched by the sudden removal of air pressure normal to an Earth-woven body; but still again there was no great change, not as much as Brand had believed there would be. He seemed simply to writhe in disturbed sleep.

The indifferent sliver of light,

having been reflected from the little armored body to the eyes of the watchers, dwindled as Jorgensen dwindled, until finally they both vanished, leaving the steady lanterns in the sky which had always been there—the unchanging stars. Jorgensen, little Jorgensen of the Bottom Levels of Earth, was buried in the black shroud of space.

Brand spoke harshly, breath pounding his throat: "The most horrible death any man could have. And we sent him to it——"

"You really think it is so horrible?" Gar said quietly, still staring, oddly fascinated. "I don't agree. He looked pretty peaceful."

"I thought that, too," Varney said. "Oh, I don't suppose it was so bad."

Brand looked sharply at them both and swung away. He passed a hand across his face, rubbed his eyes hard, shook himself, and slid down into the seat in front of the control panel.

"Send the men aft," Brand muttered. "We've got to get moving faster. Varney, how much air reserve have we? I mean the stored oxygen we put aboard in emergency supplies—for use in case the compensator failed? The compensators are gone now; you'd better get to using that reserve."

"Right," Varney agreed and nodded. "I think we've got enough to carry us to Tycho—with one less man. And if we can pull away from the Controls——"

"I'm trying that last now," Brand said grimly, hands working at the great board. He sent out an attention call to the aft-compressor room.

Margot, the chief technician, rumpled an answer.

"You giving us all you've got back there?" Brand demanded.

Silence.

Then Margot said hesitantly: "I

might do a little better, chief, if we cut down on lights and gravity in the grids—and if you're willing to take the chance on blowing the fire coils."

"We'll take that chance," Brand said. "Jorgensen took a bigger one."

Margot stiffened. "Yes, sir."

For a little while after the other had cut off, there was no change.

Then speed came into the dials before Brand. Black needles trembled on pressure gauges, shifted far over toward the limit of the dial, edging past the red tracery of the danger point; the dark fingers of the acceleration indicators began to feel the purring flow of power, climb upward.

STILL the fleet of the Controls came on, kept creeping closer. Gar and Varney watched the clustered ships behind grow larger on the televisior screen, take shape and solid outline, strengthen into entities separate and distinct, in place of blurred blobs of distant light. Brand muttered softly, stabbed his hands against the green handles of the master switches in a sudden frenzy.

Varney asked: "Still gaining?"

Brand answered in one clipped breath: "Still gaining. Oh, if I could have a little more power!"

Gar's voice came: "We could cut off this big screen you and I are using, Varney, and keep track of the Controls from Brand's lookout plate. Would that help?"

"Yes," Varney muttered.

"Help?" Brand echoed. "It'll help plenty. Got any more ideas like that, Gar?"

"One more, and then I'm afraid I'm through."

"Well, let's hear the one you've got."

"Right!" Gar said. "Cut off all gravity from the grids. Under this acceleration, we'll scarcely miss it, and the grids eat a little power, don't they?"

Brand nodded. "Sure, they do. While I'm connecting with Margot to tell him that, Varney can block out that screen. O. K.?"

"Yes," Varney said.

He leaned forward, changed the set-up of tubes and condensers, snapped a switch, disconnected circuited wiring. The huge screen dimmed, faded, grew dark. Gar nodded, moved across the room to Brand's position, stood behind the other, watching. Varney followed silently. Standing side by side, they were both suddenly very still.

Brand muttered: "Close!"

"But it's not enough?" Varney asked heavily.

Brand's eyes flickered. "No. It's not enough."

Gar spoke, not looking at Varney: "How much more will it take to put us over?"

"Don't know exactly," Brand said.

"But only a little more, and we'd be clear—with the lead we've piled up in three days."

"Then they've stopped gaining?" Gar asked eagerly.

Brand snarled at him without patience. "No! They're still coming up on us, but we've shaved down the difference in speed. Their lead ship is making three thousand even; and the *Isis* is sticking just above twenty-eight hundred——"

"How much of a lead have we got?" Varney demanded.

Brand hesitated an instant, glancing at dials, calculating fast. "Around twenty-five thousand miles. And we're losing that."

Decision came in his eyes. He snapped the attention call again; got the chief technician growling

at the other end of the connection. Then he said: "You've taken out all the stuff you were using for gravity?"

"Yes, sir."

"Then tone down on heat and air circulation. And anything else you can think of. We've got to have every atom of power you can scrape together. Understand that?"

"Yes, sir."

"Break."

Margot nodded stolidly, broke communication.

Brand looked at the two standing behind him. "Listen," he said. "We're in for a taste of cold for a while—and some other things. We're none of us going to be very comfortable, but we'll do the best we can. Get in those seats and strap yourselves—tight."

Varney obeyed in slow silence; but Gar clung to the back of Brand's place in a tightened grip, waved the other away.

"I'll stick here a little longer," he said. "As long as I can hold out. I might help, some way."

Brand shrugged. "All right. But watch yourself."

GAR CAUGHT at that thought. Help the ship, some way. If there was only something he could do. There was something he could do, something he had to do. He had known it for a long time. Might as well admit it now, no use hiding it from himself—he'd been afraid, he had let Jorgensen——

He loosened his hold on the rounded edge of the control chair, took careful steps across the room to where Varney sat strapped in, each movement lifting his thin body high off the floor grids, to come drifting down again in a slow float. Queer sensation, that was. No gravity in the grids, nothing to hold you

back, pull you down; a feeling of exultance went through you, walking like this—smooth power flowed through your muscles, you glided with light easiness.

He touched Varney on the shoulder.

Varney said, not moving his mouth: "What are you trying to do?"

"Don't you know?" Gar said, staring straight into his face.

Varney dropped his eyes. "No."

"It's just my job," Gar said simply. "I tried to shift it off on Jorgensen's shoulders, but I didn't get by. I'm glad I've got the chance to make up for that in the only way I can."

"Sit down here," Varney said, not answering him. "I'll strap you to this seat next to me."

"You're listening," Gar said, "and I know it. I let Jorgensen go, because I was afraid. And because I didn't believe in this thing as much as he did. I thought what Brand thought and you thought—for centuries some men have been trying to do something for the bottom of the pyramid. None of them, so far, have succeeded very greatly. And I thought it wasn't worth dying for. But it was— Little Jorgensen showed me that it was."

Varney said: "Maybe you're right. But what can you do, now? He's gone. He dropped out, and it didn't do us any good. What are you going to do now?"

"I'm using power," Gar said softly. "Every time I breathe, I use a little power, I'm holding the ship back a little. I haven't got weight, with the gravity gone, but I've got mass. I'm a drag pulling the ship down. So I'm going to stop breathing. I'm going to leave the ship."

"You're out of your head," Varney said. "Jorgensen went that

way; one is enough. We'll get clear without any more of that."

Gar stood there, swaying a little on his uncertain feet. "No use lying, Varney. We both know the truth. You were thinking of dropping off yourself."

The other's eyes changed. "No. I wasn't. That's what bites into me. I wouldn't have the nerve. I'm scared."

"So am I," Gar said softly. "But you'll help me, won't you?"

A curtain of silence stretched between them. Brand was muttering again at the controls, his voice disjointed and incoherent, a heavy murmur creeping out across the room. Gar waited.

Varney made a harsh sound in his throat and looked once at Brand's curved back. Then he nodded and began to fumble with numb fingers at the straps binding him in.

"If you want to go," Varney muttered. "I guess I can't stop you."

HE JERKED upward out of his seat, rose high, touched the room's ceiling with his shoulders, dropped at a long sloping angle to the floor. Brand heard the thud of that light fall and swiftly turned.

"What're you two doing?" Brand asked.

His glance shifted to the space suit, sprawling in ungainly awkwardness on the floor near the E lock. Then he knew.

Gar stood silent a while. Then he said: "I'm doing what I should have done, before Jorgensen dropped out. He gave me back my nerve. It's my job. He tried, but he couldn't do it for me. Maybe what I'm going to do will give the chance to you and Varney to get through. You've got the ship to work clear, and the two of you can do it. That's your job."

Brand didn't speak for a long space. He sat still, meeting Gar's steady eyes, listening to the other's words. Then he moved. "Varney," he said. "Take over here. I'll handle Gar. If anybody else goes——"

"It won't be you," Gar said flatly.

Varney stood hesitant.

Brand roared: "You got what I said! Take over."

Varney took over.

Brand glanced at him once, and stood beside Gar. "I'm not letting you do this," he said quietly. "Understand that?"

Gar took a slow shuffling step toward the E lock. Bending down, he lifted the heavy metal-fabric suit with both hands, held it out.

"Hold the suit while I strip," Gar said. He grinned. "Funny—I'm going out the same way I came in, wearing skin over bones."

Brand's legs shook. He turned his head, hands still at his sides. "Gar, you've got nerve."

"Nerve?" the other muttered. "Maybe. Maybe I have. Hold this suit."

"All right!" Brand said, the trembling burned out of his voice.

He stood the suit up on the stiff metal legs, then held it with steady fingers, even helped the other slide slowly down into its metal embrace. There came to him the power to fit the helmet close in the neck groove, lock mesh slips fast, give Gar one last steady look through the open face plate.

"All set?" he asked.

"All set!" Gar said.

Brand found it possible to be proud. His fingers plunged at the mechanism of the inner lock. The smooth panel moved back, merged into a narrow opening. Opening into space—— Gar came close, brushed across Brand's body, felt

the other touch against him, and stood head down inside the lock.

The trembling shook Brand's legs again for a long instant. He stumbled, swayed against the closing switch, flung it over in a quick convulsive jerk. The inside panel snapped shut.

"Now," he muttered softly.

His fingers flashed up again, spun the gimbaled control that released the outer plate, sent air and man spinning in headlong flight from the lock. He heard the gushing whine of gas expanding into free space, caught the scrape of a metal body against the ship's side. He straightened, eyes dim. Gar was gone.

VI.

BRAND went across slowly to where Varney worked with feverish fingers, body crouched, face bent over the lighted mechanism of the power board, head twisted away. He touched Varney. Varney looked up, eyes squeezed in painful pin points.

"He dropped out?"

"Yes," Brand said. "All through—all through!"

Varney hesitated, respecting the meaning of his sudden silence. Brand remained staring at the vision plate inset above the controls, his eyes fixed on a glinting point of light—light reflected brightly for a time from the spinning metal body drifting back through the space behind the ship. Brand shook himself, rubbed a harsh hand across his face. He looked at his fingers in the dim light. Moisture there. Shouldn't be. Sweat. No. Not sweat—but his face was for some reason a little damp.

He glanced up again, and saw the clustered glow that held the center of the visa plate. The antago-

nism within him was intensified into flame; he felt a terrible hate for the ships behind.

"Varney, how much lead—now?"

Varney calculated swiftly, fingers flying. "Twenty thousand."

Brand caught his breath. "Twenty thousand! Speed?"

Varney stared, his eyes frozen on the steady dials of the banked board before him. Then he swung around, exultance throbbing in swift words: "Speed approaching three thousand!"

Brand cried out hoarsely: "Then soon they'll stop gaining! And we've a lead of twenty thousand!"

He sucked wind into his lungs. "Say, we're pulling clear!"

"It looks like it," Varney said, grinning. Then his smile was wiped off his face.

Brand looked at him. They both held the same thought and knew it.

Brand asked, softly: "Varney, when did we cross twenty-nine hundred?"

Varney's glance shifted.

"Tell me," Brand said in a fierce voice. "You've got to tell me. And don't try to lie."

Varney knew what the other meant. He said: "Just before Gar went out."

"Before!" Brand groaned.

He stiffened and stood up straighter, hands gripping the edge of the control seat. "Before Gar went out— Then what he did wasn't necessary. We could have gone through without having him—you've checked on that?"

Varney steadily faced him. "I've got it down here, tabulated. But you've forgotten something. Twenty-nine hundred wouldn't be enough. We needed three thousand. And we've got it. Gar put us over. We'll cut across just in front of that meteorite cluster, holding three

thousand even, and the patrol ships will hit the thick of it. When that happens, they've lost us, and they'll know it. They'll turn back."

Brand nodded dimly, as if no more than half comprehending. He moved his head, then his eyes took on a bitter keenness again. "All right; I'll take over. Are we close enough to start calling 17, Tycho?"

Varney nodded. "Think so. You mean, then—we're going to keep on fighting?"

Brand said: "Why ask a damn fool question like that? Didn't—wasn't that what Gar wanted?"

Life was in Varney's face again, a spark lighted his bleak eyes. "Yes. Gar—and Jorgensen."

"And Jorgensen," Brand said softly.

He was watching the glimmering square of the televiser reception plate. It was beginning to pulse and flicker, as if jerking to the impact of a tight short-wave beam, reaching out across blank space to the speeding ship.

Brand expelled a sudden swift cry of triumph. He moved his fingers in a rapid, intricate tracery. The screen shifted, gave a short vision of the looming face of the giant Moon, showed a stabbing flash of light leap up and die in a lunar crater, faded and came again. Then the beam plunged deeper through infinity, changed to detail, caught the outline of a bleak sending transmission room, with a tall man working at the controls of a high-power televiser. The man nodded and grinned, feeling the contact, and gave a swift salute.

"Crater 17, calling the *Isis*!"

"Contact made!" Brand cried.

"Contact made!"

VARNEY made a strangled sound of joy, gripped Brand hard. Brand

half turned, then swung back, built up closer connection with the distant sender.

The snap faded from the captain's voice; abruptly he looked over his shoulder at Varney, muttered: "Take over again."

Varney nodded, helped Brand up from the narrow seat, then buckled himself in, and sent a call to the machine room for gravity to be poured again into the grids. Margot stolidly took the order and agreed.

Varney, on impulse, swung the tight beam away from the crater near Tycho, sent it back along the ship's arc to the dimming blur of confused light that was the Controls' fleet; dark objects, great jagged groups of iron and stone, swept in between the *Isis* and the pursuing fleet, blotted out the savage ships. Varney's lip curled in a vindictive grin at sight of the sudden scurry of movement in the patrol.

"I hope they break their damned necks!" he muttered. Then jerked at the dials before him, fingered out again for contact with the crater transmitter— Got it!

"Crater 17, calling the *Isis*! Why don't you answer? Why don't you answer? Contact broken."

"Contact made," Varney said, grinning. "Got you the first time."

"Is this the *Isis* again?"

"Right!"

The other flashed: "Did you have trouble coming over?"

Varney's lips laced. "Yes. Bad trouble. Everything wrong on Earth. Gagin sold out."

The answer came: "We know. Controls have had patrol ships sweeping Tycho for three days back. But we didn't get the whole set-up here. We are waiting for orders."

Varney swung. "Brand, you heard that? What'll I give them?"

Brand was looking back through spurned space, eyes straining for a last glimpse of a spinning metal body. He straightened, came over.

"Brand talking. Give you plenty of orders when we berth there. Have the A slip-cradle ready, and we'll use it shortly. I'm bringing the *Isis* straight in."

The distant operator nodded. "Right, chief! We'll be ready."

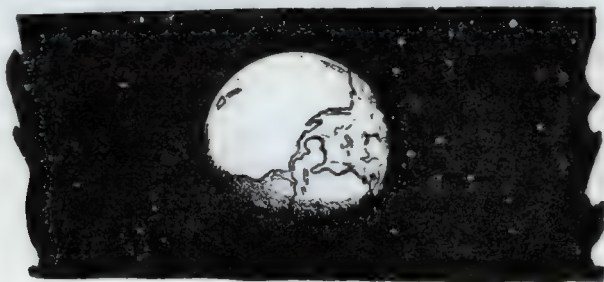
"And we're coming," Brand said harshly. "Break!"

The connection faded. Varney sat staring, face blank, fingers relaxed and numb, touching the cool metal of the huge directing panel.

He glanced away, followed Brand's eyes out through space: "They've beaten us."

"This time," Brand said savagely. "But we're going to fight again."

Far behind them indifferent splinters of light struck for an instant on the shapeless blob of a metal-fabric space suit—and went on to blaze in blurred brightness against the sides of shining ships, the patrol fleet, turning back toward Earth.



THE EMPEROR'S HEART

by Henry J. Kostkos

*In which science probes
the realm of the dead—
to bring life back to a
beloved ruler.*



IN THE PRIVATE hospital room of his palace at Veerdor, Emperor Georges Delrex VI of Lungradd lay dying. The populace of the capital city approached the royal residence with bated breaths and looked with concern toward the heavily curtained windows of their beloved emperor's room.

There was not a man, nor a woman for that matter, in the far reaches of the vast empire of Lungradd who would not have gladly laid down his or her life if their monarch could only be spared them.

For under the emperor the lot of the masses had been indeed happy. Amazing advancements in the arts and sciences had brought blessings instead of misery to the average man and woman. There was justice in the empire; the lowliest had equal rights with the highest; poverty was a thing relegated to history books along with the tortures of medieval days and the twentieth-century experiments in democracy that had brought with them a flood of racketeering and ill-smelling politics. But all this was a thing of the past;

their emperor had seen to that. Now he was dying.

Dr. Emanuel Krofft entered the room where the Empress Maureen sat with sorrowful face. The prime minister, Durval Aanstong, who paced up and down in front of her, was sorely vexed. There was no heir to the throne in the event of his majesty's losing in the crucial struggle against the ravages of heart disease. Then there would be chaos — He did not want to think about the consequences — there would be headaches enough when the time came.

"Well, doctor?" He looked up petulantly at the gray-haired man who bowed low to the empress. "Is there any improvement?"

Dr. Krofft looked reluctantly into the eyes of the Empress Maureen and shook his head in silence. His heart was too full for words. A teardrop coursed slowly down the cheek of the stately woman, but she lifted her head and looked up bravely at the sympathetic physician.

"We must take drastic measures,

Dr. Krofft. At a time like this nothing must be left undone. I—am sure you have done everything within your power, but could there possibly be anything you have not tried?"

"I have about decided, your majesty, that we must risk the final chance," the doctor said bravely.

"What can that be?" Prime Minister Aanstong asked hopefully.

"The artificial heart of Dr. Paul Durgget of the University of Polgar. I have asked the doctor to come here, and he has examined his majesty. But before he——"

"An artificial heart?" Aanstong broke in angrily. "What kind of talk is that from an eminent physician? Don't bother to explain, I know what I am saying. Why, the idea has been ridiculed by the foremost doctors and scientists the world over. The idea of perpetrating the product of a lunatic's mad dream on our beloved emperor." Aanstong finished indignantly and continued his agitated pacing up and down the room.

The Empress Maureen rose from her chair and walked over to Dr. Krofft. "Don't mind Monsieur Aanstong, he is overwrought by the cares of the state. Tell me about this artificial heart," she encouraged softly.

Dr. Krofft looked apprehensively at the prime minister, and receiving a reassuring nod from the empress he launched into an explanation:

"What I was about to say was that before Dr. Durgget would undertake to make the experiment on his majesty he wants it distinctly understood that he is doing it as a last resort. You see, this artificial heart of his is a fearfully delicate thing. It is still in the laboratory stage and the doctor has not been able to test it thoroughly. But he believes in it

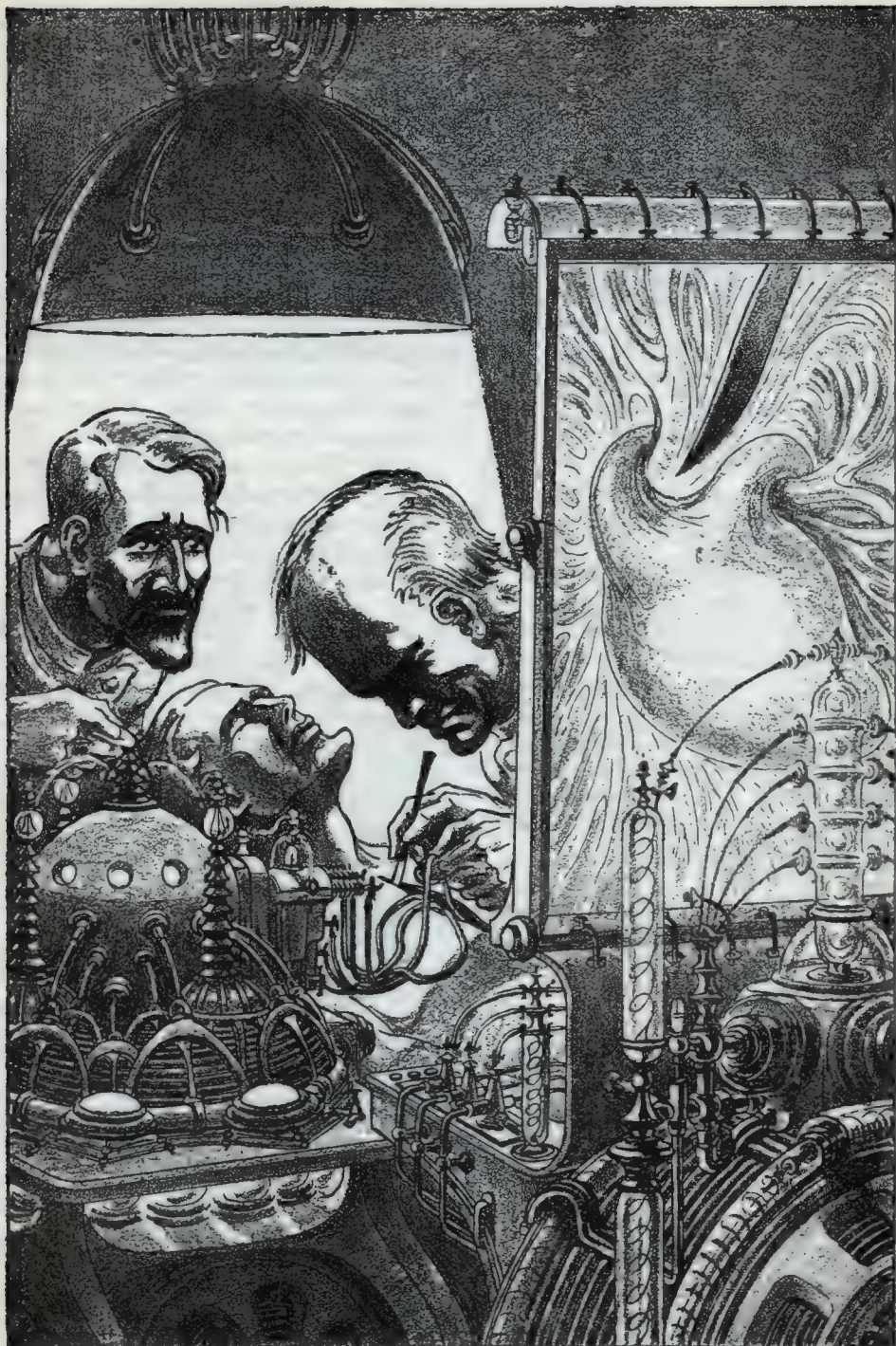
absolutely, and from what I have seen of both the man and his revolutionary apparatus, I would recommend that he be permitted to proceed."

Krofft took a deep breath and continued: "The Durgget artificial heart, your majesty, is just what the name implies. It is a complex apparatus that takes the place of the human organ. Not only does it pump the blood through the system at a predetermined rate, but it has the most sensitive control ever devised by man; a control system that is an effective substitute for the thousands of nerve fibers that bring their messages to the attention of the heart whenever more or less blood is needed for any organ of the body. This is really the most essential part of the entire apparatus, for without it there would be no way of determining what the needs of the body were to govern the rate and force of the heart.

"I am told that in order to connect the device, the human heart must be excised and tubes run from the veins and arteries to the artificial organ. It is a delicate operation, your majesty, but our only hope. As you know, we thought that the emperor's heart would serve him for many a long year yet, but with the ravages of malignant endocarditis the valves are so badly ulcerated that—that he has no chance of recovery."

Dr. Krofft looked appealingly at the Empress Maureen. The woman sat for a long five minutes with her head resting in her hands, her elbows on the gleaming metal table. At last she raised her head and nodded.

"Go ahead, doctor. I want the operation performed at once, and—I know that you will do your best for the sake of our subjects and—



He watched the screen breathlessly—for on it was mirrored every movement of heart and instrument.

*Illustrated by
Elliot Dold*

for my sake. But do not be afraid if—you should fail——”

She rose heavily from the chair and without daring to glance either at the frowning prime minister or the sympathetic doctor, she walked slowly through the cloth-of-silver portières toward her chamber.

IN THE surgical room of the palace two elderly men worked feverishly under the mellow glow of the penetrating Dormium lights. A complicated arrangement of glass, metal, rubber, dials, and switches mounted upon a large tea-wagon vehicle occupied their attention.

Dr. Krofft glanced up for a moment to speak to the tall, angular man alongside of him. His eyes riveted themselves upon a forehead so massive that Lungraddians who saw it for the first time stared in unconcealed amazement. A tuft of soft downy hair, snow-white, encircled the base of his skull like a crown of full-blown cotton plants. With long sinewy surgeon's fingers he adjusted the delicate control relay that was the master mechanism of the artificial heart.

“You say, Dr. Durgget, that you will be ready in time?” Krofft inquired anxiously, looking for the hundredth time at the crystal chronometer that was suspended from the ceiling.

In tones astonishingly mellow and low for one whose appearance was so harshly forbidding, the distinguished scientist and surgeon answered assuringly: “My instruments indicate that the Emperor Delrex's human heart will serve him ninety minutes longer. But he will not be required to use it for that period; in less than an hour his life-blood will be pumped through his system by means of this apparatus. In fifteen minutes you may have

the patient brought in to me here.”

He turned again to the exacting task of preparing the intricate apparatus for its crucial test. The nerves of Dr. Durgget were of steel; not by any outward sign did he betray the slightest doubt as to the outcome of the most delicate surgical operation ever to be performed in the history of mankind, even though he had for his first patient the wisest and most beloved ruler whose life would be a priceless gift to his two hundred million subjects, and whose death might even plunge the entire world into chaos.

The pomp and splendor that usually characterizes all the movements of royalty, even in the advanced State of Lungradd, was missing when two nurses wheeled the old monarch into the operating room on an electrically warmed stretcher. Dr. Krofft bent solicitously over his emperor, but Georges Delrex VI was beyond the power of recognizing even those closest to him. He had lapsed into the coma that precedes death. Dr. Krofft's concern was far from being unfounded; his patient's life hung by the thinnest of gossamer threads, which were likely to burst asunder at any moment.

When the emperor had been carefully placed upon the operating table, Dr. Krofft turned to Dr. Durgget and shook his head hopelessly.

“I'm afraid that in his weakened condition he will never survive such a serious operation.”

“Not if we performed it in accordance with the usual technique, but with the use of this vita-ray, which takes the place of the standard anæsthetics and at the same time stimulates the vitality of the patient to an unbelievable extent, there is

absolutely no danger from the operation itself——”

“The vita-ray?” Krofft broke in. “Is that also one of your remarkable developments, doctor?”

A flicker of amusement gleamed for an instant in the calm blue eyes of the scientist. “I don’t know that I would care to classify it as strongly as that, but it was a devilishly bothersome development. It required exactly four years of my life to perfect.”

While he talked he adjusted the reflector of a device that resembled a sun lamp above the skull of the emperor and snapped some switches on the control board. Immediately a diffused glow of purple luminescence was emitted from the bulb in the reflector, to light up the face of the man on the operating table and to transform it into a ghastly apparition. But even as Dr. Krofft watched, the baggy wrinkles of the emperor’s face were ironed out as if they had suddenly been filled with firm young muscles, the eyes that had almost sunk from sight within leathery sockets came to the surface and reflected the rejuvenated strength of the man, like mirrors of fine silver flashing back the energy of the sun. The entire frame of the emperor relaxed and his breathing became deeper and more regular, as if he had fallen into a comfortable sleep.

Dr. Durgget nodded to the emperor’s physician. “You may begin the incisions, one here below the sternum, the breast bone.” With a practiced hand he marked a line on the patient’s bared chest. “And another here on the pectoral muscle between the second and third ribs. Then we will connect his blood vessels and nerve fibers to the apparatus before excising the heart.”

And as if anticipating Dr. Krofft’s

perplexity, he explained: “No; it is not necessary to cut the ribs and employ the standard chest-operation technique to gain access to the heart. This method, as you will see, is quite effective.”

A nurse wiped away a thin ribbon of scarlet that followed the first deft stroke of the scalpel down the body of the patient. Krofft had been fearful lest the emperor should feel the pain of the incision, as the man seemed anything but fully anesthetized. But the purple ray served its purpose well; there was not a twitch of a single nerve fiber as the cut deepened under the skillful manipulation of the surgeon.

DR. DURGET wheeled his apparatus alongside of the operating table. From a semicircular chamber of highly polished metal, innumerable tubes and wires terminated in an antiseptic bath. These were the artificial blood vessels and the nerve fibers that were to be connected to the living ones in the emperor’s system at the point where his own were to be severed from the dying heart.

“Now, doctor, if you don’t mind, I’ll hook up his new carbureter.”

Dr. Durgget smilingly took over the patient.

“Now we’ll just move this transverseoscope above his chest so that we can see what we are doing. The device will enable us to see clearly the heart with its connecting fibers and blood vessels.”

The reflector of the instrument resembled a ground-glass slate, but when it was energized and enveloped in a misty yellow light, there was a gasp of astonishment from the nurses and even from Dr. Krofft, who had tried unsuccessfully to assume a stoical expression, telling himself that nothing he was to

see would in the slightest effect his composure. But, by the beard of Hippocrates, was there no limit to the marvels that this man Durgget was to produce before his eyes?

There, framed in the slate was the heart of the Emperor Georges Delrex VI. And that organ could be seen magnified in its natural colors, beating feebly, the veins and arteries pulsating rhythmically in unison with it. Unlike the ancient X rays that showed only a silhouette of a denser organ or object, or even the revolutionary TY-scope which had come as a boon to twenty-second-century surgery—Dr. Durgget's transversoscope was as far in advance of these crude devices as the Ré lamp was over the inefficient incandescent bulbs of two hundred years before.

"We will connect the artificial heart to the emperor's system and start its operation before the patient's natural organ can be removed," the Polgar University medical scientist was explaining in his pleasantly low voice, "and to do that it is necessary to tap every one of the blood vessels and nerves that leave the heart. Yes; that is the most ticklish part of the entire task. But here's how we'll do it."

He selected a slender instrument of polished metal that served as a remote controlled arm and fingers with which to perform the delicate task of tapping and sewing the blood vessels and the fine fibers near the heart. With a bold stroke he inserted the tip of the instrument through the incision made between the ribs and brought the minute scissors into contact with a pulmonary artery. One of the tubes leading from the artificial heart was inserted and skillfully manipulated into position, then securely fastened so as to be absolutely air-tight.

"Now comes the real task," Durgget muttered half aloud. "A little more of the vita-ray, he is getting weaker—losing ground faster than I had expected—there—that's done." He breathed a sigh of relief.

His fascinated assistants looked into the transversoscope and saw the sharp points of the scissors slit the artery neatly, and then the tube was forced down upon the blood vessel in such a manner as to seal it again until the surgeon was ready to cut over to the artificial organ.

As Dr. Krofft watched with growing interest, he saw the great surgeon skillfully cut into one artery and vein after another and fasten the rubber tubes into place. Even though the controlled atmosphere in the operating room was comfortable, great beads of perspiration streaked down Dr. Durgget's face. The work was excruciatingly exhausting. Dr. Krofft felt absolutely helpless. If he could only do something to relieve his colleague——

He looked sharply into the face of the unconscious monarch. Were his eyes dropping back into their sockets? Were the baggy wrinkles forming and the flesh sinking away again? His respiration rate as shown on the indicator had fallen to an alarmingly low point. Dr. Krofft gave an involuntary groan and glanced at the scientist. Then his face blanched.

DURGGET was no longer the calm, methodical genius with absolute confidence in himself. He had been transformed into a creature of nerves with arms and hands that flew with incredible swiftness, like bombarding atoms from one piece of apparatus to another, motivated by a race against the enemy—death!

Now he sped from one nerve fiber to another. Tapping, tying, sever-

ing the nonessential ones. Incredible, how the man could unravel this maze of fine fibers and unfailingly connect each to its proper outside cord.

The indicators on the respirometer and the pulsometer suddenly dropped below the red safety-limit mark on the dial. Dr. Durgget bit his lower lip and twirled the knob of the vita-ray control over hard. The purple light surged into a mad nightmare of violent color, so penetrating that the doctors and nurses shut their eyes to blot out those terrible vibrations.

"The only chance—use the supreme stimulant—it will keep his body alive while his heart dies."

In spasmodic jerks Dr. Durgget, wild-eyed with dread that his experiment would fail, unconsciously voiced his actions to his terror-stricken assistants.

The pulse and respiration had stopped entirely, but only for an instant. At the snap of a switch the motor of the artificial heart whined into motion. The gauges and meters on the apparatus began to register, and even as the surgeon severed the now useless blood vessels and nerve fibers at the heart of the emperor, the new pump began to function and shoot the life fluid through the system of the man who, according to all laws, was already dead. The indicators of the respirometer and pulsometer trembled, and then slowly but unfailingly mounted toward the vertical until they rested on the blue normal line. The dead had been resurrected, and, for the first time on earth, a man continued to live without his heart.

There were audible sighs of relief. The two nurses laughed hysterically; Dr. Krofft forgot himself long enough to attempt to light a cigar; Dr. Durgget fell into a chair.

"You may finish the operation, doctor," the scientist called to the emperor's physician in a far-away voice. "Remove the heart and seal the incisions. I'll be all right in a minute—just exhausted. Devilish strain on the nerves—especially my first attempt, but I am so happy."

Dr. Krofft speedily completed the operation and reverently placed the great heart of his emperor into a jar. Then when the incisions had been properly bandaged he shut off the vita-ray at a signal from the medical scientist.

"It will be some minutes yet before he regains consciousness," Durgget said. "Meanwhile I will re-examine his system to make sure that everything is normal."

He was apparently well satisfied with the results of his work until he once again examined the connections within the emperor's chest through the transversoscope. For a long time he bent over the magnifying viewing panel and checked and rechecked the nerve fibers, as if trying to convince himself that he could not have been mistaken.

Krofft looked at him anxiously, sensing the man's agitation. "Is there something wrong, doctor?" he asked.

"I hope not. Just now there seems to be a very important nerve fiber missing and another one crossed, but it's rather hard to tell exactly since the new connections have been established. However, we shall have to watch him carefully for the next few days."

FROM the royal palace a bulletin was dispatched to the entire nation: "Operation successful. His Imperial Majesty Georges Delrex VI lives!" A national holiday of rejoicing was declared throughout Lungradd; the streets of the cities

were thronged with joyful crowds, strangers shook hands with one another, patriotic meetings were held, school children offered prayers of thanksgiving.

The Empress Maureen and Prime Minister Aanstong entered the emperor's room reverently. They saw with their own eyes the miracle that had been wrought—although the weird-looking machine on wheels with its myriad tubes that were lost mysteriously in the chest of the emperor filled them with awe. They remained only a moment, tears of gratitude in their eyes.

They met Dr. Krofft outside of the emperor's chamber.

The Empress Maureen grasped his hand warmly. "He looks splendid," she enthused, "I do not know how to acknowledge our indebtedness to Dr. Durgget, and to you, my dear Emanuel. The improvement is unbelievable. Why, Georges actually appears years younger," her eyes took on a far-away look and filled with the mist of reminiscences, "almost like the time I first met him. He was Prince Georges then, a tall, magnificent figure. Oh, I am so happy!"

Even Dr. Krofft was amazed by the revitalized energy that his emperor displayed. In three days the incision had healed entirely, a thing heretofore unheard-of. And the man himself arose from his bed and walked around within the narrow limits permitted by the tubes and wires connecting him to his life-sustaining artificial heart. All signs of the monarch's age were gradually disappearing; his skin became smooth in texture and glowed with the pink of youth; his eyes flashed with the fire that so distinguished him in his early parliamentary days; and his walk had the elasticity of an eager boy.

But it was this very improvement, this metamorphosis, that gave Dr. Krofft genuine concern. He discussed it with Dr. Durgget over the radio-visionphone.

"I'll fly right down to see him," the scientist promised. "Perhaps those nerve fibers are the cause of it——"

Dr. Durgget tried to maintain his professional air of nonchalance when he saw the Emperor Delrex, but an involuntary gasp of astonishment betrayed him.

"Why, your majesty, I would never have known you! You have changed completely."

"Yes, doctor; I owe everything to you. If it were not for these shackles here," he indicated with a wry face the confining tubes and wires, "I would join the expedition from your university that is flying to Mars next week. But I can hardly convince myself that I am really alive; it is more like a pleasant dream, and I am afraid that at some moment I shall awaken."

While the emperor was chatting with boyish eagerness, the scientist assembled the apparatus he had brought with him from the university. He now attached registering devices to the man's arm, chest, and forehead, and took readings, then made some lightning calculations in his notebook. Dr. Krofft, watching him closely, saw the telltale signs of anxiety creep into the eyes of the scientist. Yes; there was undoubtedly real reason for worry. But what, he wondered?

IT WAS not until they were seated in the privacy of Krofft's office that Dr. Durgget spoke.

"How old did you say his majesty was?" he inquired suddenly.

"Just past fifty-six."

"Dr. Krofft," the scientist's voice

was low and deadly earnest, "you are no doubt aware that I was using the Roojan age-determining apparatus on the emperor." And as the other nodded, he continued: "I can hardly believe it myself, but at the present time his majesty is seven years younger than he was before the operation; his physical age is forty-nine."

Krofft started violently. "But the process, Dr. Durgget, is it continuing? Can it be stopped?" His voice trembled.

The scientist consulted his figures. "He is growing younger at the rate of one year every twenty-seven hours. If it continues, he will be back to infancy in two months. I must confess that I had feared some complications would arise upon discovering that in my great hurry I had reversed several of his nerve fibers and probably left unconnected some very important ones.

"But just think, Krofft, if we can adequately control this rejuvenation process, we have in our possession the priceless secret that generations of men have been seeking—the fountain of youth."

The scientist's enthusiasm for this unexpected revelation had carried him away on a fascinating line of thought.

"That is well enough, doctor, but how about the emperor? His condition is serious."

"Oh, yes!" Durgget was jerked back to the realities of the present situation. "I'll attempt to rectify his neurotomic condition by interchanging several of the conductors at the artificial heart. Come; we will do it now."

Dr. Durgget studied the nerve connections terminating at the machine for a long time. It would be extremely dangerous to disturb indiscriminately the delicate sensory

fibers without considering every possible effect. While he worked, he kept a close watch on the emperor, constantly noting the readings of the dials and gauges connected to his system.

"I believe this will do the trick, doctor," he announced at last, yet with little conviction in his voice.

A MONTH went by, and at the end of that time the Roojan age-determinator revealed that the Emperor Delrex was now only a youth of twenty-two. But his reaction from the rejuvenation process was violent; he fell into a deep restless sleep. The Empress Maureen and the prime minister, the only two people who shared the secret with the scientist and the doctor, were thoroughly alarmed.

"But, my dear empress," Prime Minister Aanstong wrung his hands in anguish, "I forewarned you that nothing good would come out of that crack-brained idiotic, yes, murderous experiment. I wish that you would waive the code against capital punishment and let me send this dangerous fanatic to the lethal chamber."

The empress looked up with tear-reddened eyes. In spite of her grief over the cursed paradox of a rejuvenation that was finally to result in the death of her beloved consort, her mind was rational. "Would that save the life of Georges?" she asked simply.

For twenty-five long dreary days the two doctors watched over their patient constantly. Their vigil was shared by the empress who would not leave her husband's bedside even at mealtimes. And as she watched with eyes dulled with horror this drama of a devilish quirk of biology, she saw the youth transformed into the boy, the boy into an infant, as

the process continued relentlessly, unchanged by all the efforts of the scientist and the doctor. All through this accelerated-rejuvenation process the emperor had been only semiconscious; he was hardly aware of the change within his body, although he talked from time to time in the idioms of his years.

On the twenty-fifth day as the tiny infant, no larger than a newborn babe, began to curl up into the position assumed by the unborn embryo, the Empress Maureen suddenly collapsed from the strain. She had lost all desire to live, made no effort to pull herself up out of the slough of despondency into which she had allowed herself to sink. In spite of everything that Durgget and Krofft could do, she lost ground rapidly and died two days later.

Prime Minister Aanstong completely lost his head. Like a maniac he shouted: "Murderers! It was not enough to torture his majesty slowly, but now you have killed the empress. I will not be restrained any longer! I am now the nominal ruler of Lungradd—you will be thrown into the lethal chamber at once! The guard! The guard——"

His screams were effectively silenced by the merciful thrust of a hypodermic needle manipulated by Dr. Krofft.

"Now, we have another patient on our hands," he said ruefully. "But Lungradd must never know at this critical moment what has happened. It would be the end of everything."

THE EMBRYO had been placed in an incubator. The tubes and artificial nerve fibers had been gradually decreased in diameter in conformity with the contraction of the heart, and the pumping apparatus was likewise adjusted periodically

to the lessened demands of the emperor's body. Now it became a problem to keep the heart in step with the embryo, that tiny ball which shrank to an almost invisible size before their eyes.

"It is no use; we can't keep the embryo alive from an external source any longer. The heart and neural system are too rudimentary to permit me to supply them through this highly complicated apparatus designed for an adult."

Dr. Durgget gave up all hope. He disconnected the remaining tubes and fibers and wheeled the artificial heart away from the incubator.

"When he—when the embryo dies I shall be compelled to make an announcement," Dr. Krofft declared miserably.

"I am so sorry to have been responsible for all this complication." The scientist sat with his massive forehead supported by his cupped hands. "If I had not meddled in the first place it might have been better——" He broke off abruptly as he glanced into the incubator. He pointed to the tiny embryo.

"Look, even without a heart, the cell continues to live! Or am I mad?" he almost shouted with excitement.

The other man's mouth opened with astonishment as he flattened his nose against the glass of the incubator. Through the microscope he could see the tiny embryo pulsating with life.

"Do you know, Dr. Durgget, I believe that a new heart has developed. Of course that is only a hypothesis, but how else can you explain such an unbelievable thing?"

The scientist pondered deeply, then in awed tones he concurred with Krofft's observation: "That—

is the only answer. I wonder what will happen next?"

For several weeks nothing noteworthy happened, except that the embryo began to develop at a natural rate as it would under prenatal conditions. Nourishment was provided by means of the Ziggler process. When there was no further doubt that the embryo would live and grow into a healthy and normal human being, Prime Minister Aanstong was overjoyed. His fierce vindictiveness subsided, and in a complete reversal of his former unreasonable outbursts he now emphatically declared that Dr. Durgget was the benefactor of Lungradd.

"May a scientist give counsel to a great statesman, your highness?" Dr. Durgget gravely asked the prime minister when the three men were closeted in Dr. Krofft's office.

Aanstong felt flattered. "Of course, doctor, I am always glad to listen to sage advice. What can it be?"

Durgget took a deep breath. This was going to be no easy task—one shock coming on top of another as it had in these past dismal days.

"You haven't announced the death of the empress yet, I don't suppose?" he asked.

"Why, no, I did not dare, if——"

"And the final condition of his imperial majesty was not made public, either?"

"No."

"Now, if it were known in Lungradd and the rest of the world that both the emperor and the empress were dead and there was no heir to the throne, it would cause unpleasant consequences, would it not, Monsieur Aanstong?"

The prime minister jumped up

from his chair as if impelled by an electric shock. "What? You're not going to tell me that the emperor, too, is doomed to die after all?" he almost shrieked.

"No, no; not as bad as that," Durgget soothed. "But allow me to finish; I must leave here soon to get back to my work at the university. You may suit yourself, but here is what I would do if I were in your place." He leaned forward earnestly and emphasized his words by tapping his long forefinger on Dr. Krofft's desk.

"I would send out this bulletin: 'Emperor Georges Delrex VI finally succumbed to the ravages of heart disease. Empress Maureen survived him long enough to bear an heir to the throne of Lungradd——'"

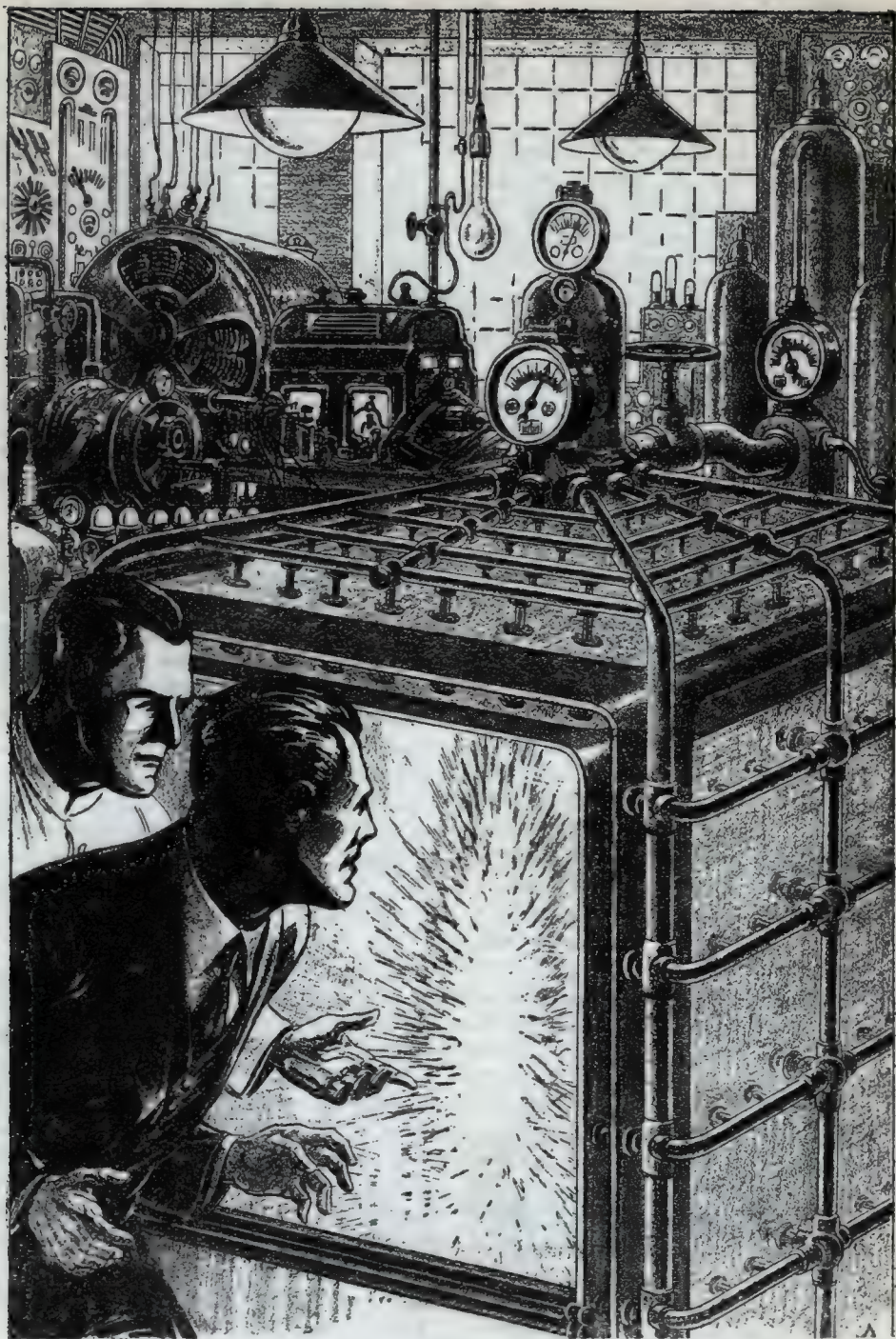
"Have you gone crazy?" Aanstong thundered at him. "What is wrong with announcing that his majesty has been rejuvenated and that he will grow into an immortal monarch—the emperor who cannot die!"

Dr. Durgget looked at the agitated man with his calm, gentle eyes. "Your plan, my dear Monsieur Aanstong, is splendid, except for one thing—the unfortunate use of a pronoun."

"The what?"

"Your mode of reference to the embryo in the incubator is erroneous. That child can never be emperor of Lungradd, for you see, monsieur, through some inexplicable phenomenon, some strange quirk of nature's laws, the germ of life has changed its sex. Therefore, you may announce that: 'To Lungradd is born a princess!'"

As the prime minister stared with dawning comprehension, Dr. Krofft nodded his head in concurrence.



He saw something abhorrent, alien—something that made a puckery sensation play along his spine.

*Illustrated by
Elliot Dold*

The World Wrecker

*Fred Anderson was exchanging
gifts with an unknown world—
but that is dangerous*

by Raymond Z. Gallun

HERE'S what I wanted you to see, Don," said Fred Anderson with a cryptic smile. "And I hope that the two years you spent in India have diminished your capacity for being surprised."

Anderson drew aside the curtain which screened a narrow alcove from the big laboratory room. Within was revealed a glass case, three sides and the top of which were heavily coated with frost. But the fourth side was kept fairly clean by a mechanical scraper, which worked steadily up and down. Various pipettes and tubes were connected to the case; and near by a compressor throbbed, mingling its sound with the drone of generators.

"Jets of liquefied hydrogen spraying inside this case, keep its contents always at only three degrees, centigrade, above zero," Anderson went on. "Now look carefully."

Don Sinclair was already doing so, and something tight and puckery was beginning to play along his spine. Beyond the thick sides of the case, double-walled and fitted with vacuum compartments like a thermos bottle to prevent inward seepage of warmth, he saw something abhorrent and alien, for which his past experience offered few comparisons. The thing resembled, in a way, a stalagmite, or a huge inverted icicle. It was perhaps three feet tall, and its outer shell was

furred with what seemed to be hoarfrost.

It was not these details, however, which aroused the vague sense of menace and dread within Don Sinclair. Rather, it was the fact that, unbelievable though it seemed in that terrific cold, the thing appeared to be somehow endowed with ghoulish life. It swayed slowly with a motion of its own, and deep within it, beneath the icy-blue glitter of its outer integument, a wicked green light waxed and waned intermittently, like the flashing of a firefly.

"It's real, all right," the scientist told Don seriously. "You know me well enough to be sure that I'm not interested in fooling people. The object in the case is a plant, Don, as nearly as the English language permits me to describe it. It was sent to me by an inhabitant—I will not say a man—of another world."

His statement was made in a quiet, matter-of-fact manner; but to Don Sinclair, used, like most other people, to a routine existence in which habit has developed definite lines separating the possible from the impossible, it was indeed a startling assertion.

DON SINCLAIR studied his friend's face for a long moment. He had been intimately acquainted with Fred Anderson, the brilliant

scientist, since their early childhood. He knew that Fred was not in the habit of misstating facts to amuse himself; and he saw now the frank and unaffected earnestness showing in the youthful savant's face and eyes.

"You're telling the truth, Fred," Don Sinclair said simply. "Only of course, I can't understand until you say more. What planet is this that you are talking about? And how did you get in touch with its people?"

Anderson's look became eager and intense. "You believe me, then, Don!" he cried. "I thought you would, but I didn't know. And if there is still any shadow of doubt in your mind, you shall be convinced before long. I'll tell you everything as clearly and accurately as I am able. It is a little world which I discovered quite accidentally. I have never seen it, for because of its distance and small size, my telescope, and, in fact, the largest telescope on Earth, is not powerful enough to make it visible. But I know that it exists, and I know approximately where it is. It revolves about the Sun roughly four billion miles beyond the Earth's orbit, and is now at its nearest approach to us. That places it over one billion, two hundred million miles beyond the orbit of Neptune. It is beyond even Pluto, the outermost of the hitherto-known planets. Because of its position so far from the Sun, I have named it Cerberus, after the three-headed dog of Pluto, the ancient Roman god of darkness.

"For three months I have been in touch with the people of Cerberus—how, I shall presently tell you. From them, I have learned a few things about their world. Because of its vast distance from the Sun, Cerberus is a place of tremendous

cold. Ice has never been melted there, even by the most complicated scientific process. Fire is utterly unheard-of. And yet that world is not only the habitat of life, but of intelligence. Startling? Perhaps. At least in the light of our limited human scope.

"Naturally, the life of Cerberus is of a far different order from that of Earth. The plant there in that case is a good example. The basic fluid of the sap that flows through its tissues is not water; for water at temperatures normal to Cerberus would be forever solid and motionless. Liquid hydrogen takes its place. This is true of all the fauna and flora of Cerberus. The more solid tissues of their systems, their outer integuments or shells, and the supporting framework of their bodies, which correspond to the bones of a terrestrial animal, are composed chiefly of ice, congealed oxygen and nitrogen, together with some mineral matter.

"On Earth, life is chemical—terrestrial animals perform their bodily functions through the chemical combustion of oxygen and food, which serves as a fuel, much as does the gasoline in an internal combustion engine. On Cerberus, life is electrical, and is comparable in function to an electric motor. The electricity seems to be drawn in some way from the highly charged atmosphere of Cerberus, which is probably composed chiefly of hydrogen, which can exist on Cerberus as a gas, though some of it frequently falls in the form of rain or snow. And that, Don, is a simple explanation of the life of that far-off planet. It isn't so difficult to believe, once you get used to the idea, is it?"

Don Sinclair had caught the train of his friend's reasoning. "No, Fred; I guess it isn't," he admitted.

His eyes wandered to the glittering, frosty thing that swayed restlessly back and forth within its glass case; and he suppressed a shudder at sight of the outré monster.

"You haven't told me how you communicate with Cerberus," Don reminded the savant; "nor have you told me how this thing was sent to you. Rocket or something? Seems a little wild to cover such a distance in a rocket."

"No; not a rocket," Anderson responded. "I'll show you my apparatus presently. First, however, I want to voice another startling fact: one of the inhabitants of Cerberus—mind, he isn't a man—is coming here to my laboratory to-night, to visit me. Or rather, he is going to attempt to come. But there is small reason to believe that he will fail."

"What!" Don ejaculated. "Here?"

"That's right!" Fred answered with a laugh, behind which there was more than a hint of eager excitement. "And now, before you express any doubts, I want to show you my apparatus and explain it to you. Come."

ANDERSON took Sinclair's arm and led him along a corridor and into another large room, where machinery purred and electric lights cast a soft glow.

Anderson paused with his guest before an upright cabinet of polished aluminum. Wires and cables, originating from a complicated maze of tubes and condensers, led into the cabinet; and a large copper sphere was supported above it by means of a slender metal staff. About the sphere, copper mirrors were arranged.

"Here is my apparatus," said Anderson. "It will perhaps be best to explain it briefly, before showing you more of it, so that you will be

able to grasp its principle more clearly.

"You know, Don, that for a considerable time I have been interested in learning about the ultimate structure of matter. The theory that I started out with is not new—namely, that matter and energy are only different forms of the same thing.

"Substances are composed of molecules, molecules of atoms, and atoms of protons and electrons. So far, so good. But what are protons and electrons composed of? To say that they are particles of positive and negative electricity is only an evasion which leaves no understandable picture in one's mind.

"As other students before me have believed, I thought that perhaps those protons and electrons were composed ultimately of vibrations of the ether, comparable in a remote way to other etheric vibrations—heat, light, and radio waves, and cosmic and X rays.

"That was the germ-idea of my invention. If matter and energy were different forms of the same thing, why should it be impossible to convert one into the other, just as ice can be converted into water, and water into steam? If the electrons and protons composing the atoms and molecules of a substance were merely etheric vibrations, why couldn't they be changed to those different vibrations which are recognized forms of energy—heat rays and light? Furthermore, why couldn't one find a way of converting a solid object into vibratory energy, of projecting it over a given distance, and of reassembling it in its original form?

"I need not dwell upon the time I spent trying to do this, nor go into detail regarding the method. It is enough to say that three months ago

I succeeded in what I set out to do. This feat is achieved by means of the action of a form of energy akin to electricity, but not identical with it.

"This cabinet, together with the auxiliary equipment attached to it, constitutes my apparatus."

The savant unlocked the doors, the hollow interiors of which were filled with heat-resisting packing, like the doors of refrigerators. Within the cabinet was a narrow space between two enormous silver electrodes. From above, a number of fine jets extended down, from which could be sprayed liquid hydrogen, which, by its evaporation, would chill whatever happened to be in the cabinet almost to the ultimate point of cold.

Don Sinclair noticed this. "You are all ready to receive your guest and to keep him in a temperature that he will find comfortable, I see," he said.

"Yes," Anderson replied. "And there are a couple of things which still need a brief explanation in order to make my apparatus understandable to you. If I desire to dematerialize an object and project it out into space, I place it between those electrodes and send a current of the energy I discovered through it in a direction which might arbitrarily be called 'positive.' The object slowly fades from sight, and the vibratory energy streams from the copper sphere on top of the cabinet, is caught by those mirrors you see suspended in that frame, and is projected for an unlimited distance in a straight line. For materializing an object sent from another station, that is, reconverting the vibratory energy of a dematerialized object into its original solid form, I reverse the current of energy flowing through my ap-

paratus, sending it in a 'negative' direction. The object materializes in the cabinet."

"That's understandable," said Don, a little impatiently. "But the people of Cerberus—how did you first make contact with them?"

Anderson laughed softly. "It was a funny thing," he said. "I was just fooling with my invention to test it out, with its commercial possibilities in view. I had not the vaguest idea of communication with another world. In connection with this apparatus, I was using a smaller and more hastily constructed one. I had placed a small electric motor in this cabinet and had dematerialized it, intending to pick it up again in the smaller cabinet a few yards away. But the motor never reappeared. In its place was a small chisel-like object made of—what do you think?—frozen mercury.

"That was the beginning. My direction-finders told me the point in the sky from which the vibrations were coming. And I subsequently learned by the time interval between my sending a message and receiving an answer that the place of origin of the incoming waves was approximately four billion miles distant. The vibrations travel at the same speed as light, one hundred and eighty-six thousand miles per second. The interval between sending a message and receiving an answer is about twelve hours. Figure it out if you like.

"Then began the strangest sort of bartering imaginable. I put things in the cabinet and dematerialized them—buttons, pins, test tubes, pencils, and countless other odds and ends. These were hurled out into the void to Cerberus, and re-materialized there. In return, I received an equal number of things that were utterly strange and alien.

Among them was that outré example of vegetation of Cerberus, which you have seen. Most of the objects, however, were tools of frozen mercury, tempered by some unknown process to steellike hardness. I still have most of these articles, preserved in refrigeration.

"And then came writing—quaint hieroglyphics traced on a fibrous white substance that vanished in a cloud of steam if exposed to ordinary room temperatures for a minute. Naturally, I replied, though of course, at first I could make nothing at all of the bizarre messages. But now the Cerberusians and I have begun to understand a little of each other's writing. But our knowledge in that direction is still very sketchy.

"That is all. And now before I prepare to receive our strange guest, I will show you the other curios the Cerberusian has sent me. Here they are."

ANDERSON led the way to a refrigerated show case at the end of the room. Within were hundreds of quaint tools and devices of a gleaming, silvery metal, and grouped in one corner were cards of a papery substance upon which appeared the odd writing of Cerberus.

"There," he said, "is the last message saying that the Cerberusian was coming and giving the time at which he would start. You, Don, are here to witness the arrival. The episode is indeed propitious."

"It surely must be!" Don affirmed in a slightly bewildered manner. "He's coming, you say, to-night?"

"Yes," the savant replied. "It's four p. m. now. He should be here at ten, since he must now be almost ready to start. The etheric impulses into which he will convert his body in order that it may be transmitted

here, will require approximately six hours to cross the void, traveling at the speed of light."

While he spoke, Anderson was busying himself with a large glass jar to which was affixed a steel flash such as is commonly used to hold various kinds of compressed gases. Within the jar he placed a large candle which would burn for many hours, and lighted it. Then he screwed the air-tight cover of the jar firmly in place, and opened the valve of the oxygen flask slightly, so that it fed a slow but constant stream of oxygen to the flame.

"I have found that the transmission of objects, either from the station on Cerberus to my station, or vice versa, is aided if the other station is also sending something," Anderson said. "It seems that the vibrations of dematerialized things from either station pull each other, come in contact with each other, and help each other in making their opposite journeys. The phenomenon is not very clear to me yet. But, anyway, that is one reason why I am sending this jar containing this lighted candle, now. Another reason is that Cerberus is a world without fire. This lighted candle should interest the Cerberusians."

Anderson placed the jar in the cabinet, between the silver electrodes. The doors thudded shut ponderously. His hand closed on a big switch.

"Are we ready, Don?" he asked with a faint smile, as he put a slight pressure on the lever.

All at once Don Sinclair was conscious of a vague sense of panic. "Wait, Fred!" he commanded. "Have you really thought of everything? Life in almost every form is predatory. Suppose the attitude of those weird creatures toward us isn't

exactly altruistic? Suppose they try to conquer us and——"

"Nonsense!" the savant broke in. "The Cerberusians couldn't live here even with mechanical aids. They'd melt to nothingness just as we would if we jumped into a blast furnace. There is nothing here that they could need or want, except knowledge, which can best be obtained through friendly communication."

Sinclair thought for a moment and saw the truth in his friend's words. Still that restless feeling of unease persisted. "But, Fred," he went on, "maybe something else. Men are always tampering. Nature may some day be avenged."

Anderson, however, cut him short. "Strange diseases are all I can think of," he said. "And I'm guarding against them to the hilt. Never will we be exposed directly to our visitor, nor he to us. Besides, the chances are a billion to one that disease originating in so cold a world could not exist, much less thrive, in any terrestrial system. And I'm always a scientist, Don. All the fiends in hell couldn't stop me at what I'm doing!"

He pulled the lever down. A high, eerie drone began within the laboratory. Through the bull's-eye window in the door of the cabinet the two men could see a violet glow flowing between the pair of electrodes and pouring over the jar containing the candle. With mingled awe and wonder, Don Sinclair beheld the object change from a solid, material thing to a ghostly wraith and vanish from sight. From the copper sphere supported on the slender staff atop the cabinet, that mysterious purple radiation was pouring in a dazzling blaze of light. Reflectors caught it and projected it straight through the laboratory wall and out into space.

AND ON another world, four billion miles distant, hanging on the far border line between the solar system and the interstellar vastness, another little drama was being enacted. From the Earthly point of view, the setting and characters were utterly strange and alien. And yet, between it and the drama being enacted at Fred Anderson's laboratory, there was a note of kinship.

In an eldritch twilight a smooth plain extended, visibly curved to conform to the outer contour of the tiny planet. The ground was covered with heaps and drifts of a white substance, which on a warmer world would have been the constituent oxygen and nitrogen of an atmosphere. From the aurora-illuminated sky, snow sifted down swiftly. It was congealed hydrogen. The remote Sun was little more than a great star, shining mistily through the thick atmospheric blanket of Cerberus.

And yet in this incredibly desolate landscape, there still was life. At the edge of the smooth plain was a narrow valley hemmed in by fantastically formed crags of ice, which were as permanent and unchangeable as the mountains of Earth. At the bottom of the valley were twisted shapes formed like great frosty crystals. Their long, glassy stems swayed gently with a ghoulishly animate motion, and from some proceeded an intermittent green light that flickered eerily on the ice crags.

Far down the valley was a city. Like monster beehives the buildings loomed up, constructed from rough-hewn blocks of ice. The architecture was solid and strong, for, because of the enormously heavy core of neutronium, the gravity of Cerberus was half again as great as that of Earth, in spite of its small size.

In the topmost chamber of one of

these buildings, two members of the dominant race were in heated argument. The room was domed by a huge hemisphere of crystalline ice, through which shone the aurora and the foggy stars. In the center of the floor a big engine, wrought from tempered mercury, worked steadily, its pistons pushed by the pressure of expanding hydrogen.

The pair of Cerberusians crouched before a black cabinet to which various pieces of apparatus were attached. They were like the vegetation of their world. Their bodies were roughly cylindrical, and from them projected queer, crystalline limbs.

Elfin tinklings, like fairy bells, proceeded from one of the creatures. His accompanying gestures were slow and deliberate.

The other responded with the quick comeback of youth. There was a sharp note of renunciation and reproof in what he said. Without more ado he opened the door of the cabinet and entered. There was a humming sound and a sudden rush of purple light.

Far up in the foggy sky a gigantic meteor blazed suddenly; but like all meteors passing through the thick atmosphere of Cerberus, it was burned to nothingness many miles above the ground.

The older creature turned wearily away.

SINCLAIR and Anderson had taken a walk in the garden which adjoined the big isolated laboratory building. But now that the moment of the arrival of their visitor was close at hand, they had returned to Anderson's apparatus. Anderson had reversed the current of energy for materialization. The two men stood watching the purple flame ripple over the electrodes in the

cabinet, against which jets of liquid hydrogen were now playing to keep the narrow interior appropriately chilled.

The scientist and his friend had little to say for a long time. Both were tense with expectation. They could only wait for the hands of the chronometer to creep their tedious way to the hour of ten. At last the time arrived.

"There! See!" It was Anderson speaking in an excited voice. His slender forefinger was pointing unsteadily at the diaphanous shape that was slowly taking form behind the bull's-eye window of the cabinet. First it could be seen through, and was dim and misty—then by degrees, it grew more substantial, more real, until it was as clearly defined as any object in the room.

It was an abhorrent thing, formed, in a way, like the Cerberusian plant which Anderson had previously received. It was like a stalagmite of frost, with hundreds of crystalline tentacles bristling about its upper torso. They moved restlessly, and a faint, querulous tinkling came from the phone which Anderson had arranged through the otherwise soundproof cabinet.

The impression was fleeting. For scarcely had the inhabitant of Cerberus fully materialized, when something happened. There was no warning save a reddish flicker piercing the purple flame that still flowed over the weird being. Then there was a thunderous concussion. The doors of the cabinet flew open. A blast of superheated vapor poured over the two men, hurling them backward with terrific force. Consciousness drifted from them.

IT MUST have been half an hour before Don Sinclair's senses began to return. Foggily he opened his

eyes. The lids were burned and raw, his body felt scalded, his clothing and hair were blackened and singed.

Bewildered, he looked about. The materializing cabinet was a blasted wreck. The laboratory was littered with fragments of shattered equipment. In one corner a bin of waste was smoldering.

It took several minutes before Don knew where he was, or was able to hazard a faint guess as to what misfortune had taken place. He saw a scattered area of salty substance on the floor. Beside it was the crumpled form of his savant friend.

Young Sinclair leaped to Anderson's side and shook him roughly. Anderson sat up, still a bit groggy.

"There's been a mishap of some kind," Don said quietly.

The telephone in the next room was ringing. The sound of its bell seemed to arouse Anderson from his semi-stupor. He hurried to the phone.

Don heard his friend barking sharp questions into the mouthpiece:

"A nova, you say? In Orion? Thanks!" Anderson slammed the receiver down abruptly and rushed back to his friend.

"A nova—a new star, has suddenly appeared in the constellation Orion," he croaked hoarsely. There was a wild look in his eyes. "Come, we've got to see it! It was Eric Krag, of Northbridge Observatory on the phone, and he should know!"

They rushed out into the garden. The cool night air was bracing. Anderson swung his arm up unsteadily toward a point just above the central star of Orion's belt. There the new star appeared, faint but unmistakable.

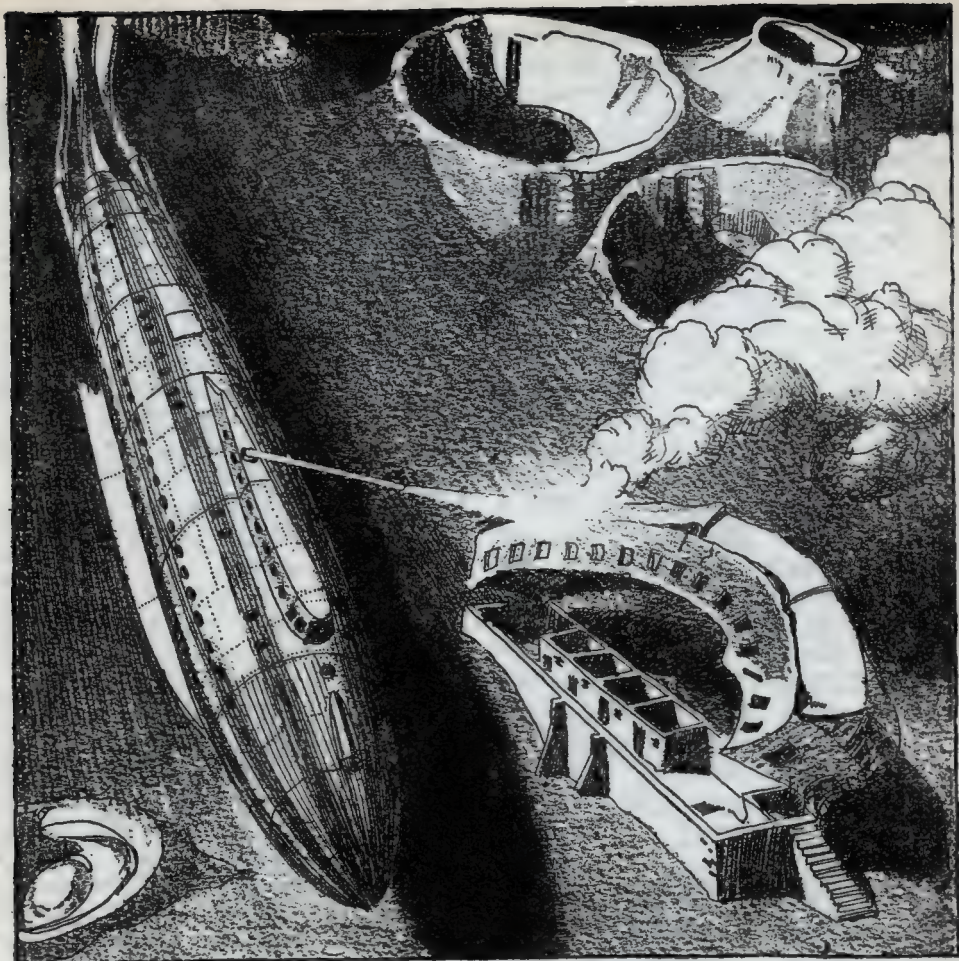
"It's not a nova at all," Fred croaked hoarsely. "It's Cerberus! We couldn't see it at all before, but now it's blazing!"

"What!" Don Sinclair exclaimed sharply.

"It's true," Fred replied. "That candle I sent did it. I should have known that Cerberus was an unkindled funeral pyre. Most of its soil was of frozen oxygen; its atmosphere was of hydrogen. The two of course, combine furiously when ignited. They never combined before because there never was any heat to raise them to the kindling point. And the Cerberusian who was coming here—the vibrations of the flame sent from here and the vibrations of his body mingled in space, and when he arrived at my station his tissues, composed partly of congealed oxygen and liquid hydrogen, burst into flame and exploded. All that remains of him are those salty mineral crystals you saw on the floor in the other room. All this wouldn't have happened if it hadn't been for that candle—just a little candle! Don, I've wrecked a world, destroyed a marvelous civilization!"

Anderson's voice rose to a sobbing scream. He covered his face with his hands. For a minute he remained thus, dominated by remorse. Don said nothing. But in his mind he remembered the warning he had given his friend.

Then oddly, almost cruelly, the scientist in Anderson conquered. He leaped to his feet. "It's done now, Don," he said calmly. "All we can do is study and observe Cerberus as she burns to a cinder. Quick! We're going to the observatory to take some spectrographs."



The Legion of Space

The building
crumpled under that merciless blast.

Part Three of a thrilling serial novel

by Jack Williamson

Illustrated by
Howard V. Brown

UP TO NOW:

In the thirtieth century, John Star—then John Ulnar—receives his commission in the legion of space, with orders to join the guard of Aladoree Anthar, a lovely, mysterious girl, keeper of AKKA—the secret weapon of humanity, so terrific

AST-8

that its plans are intrusted to only one person in the system.

For two hundred years, AKKA has protected the liberty and peace of the system from the "Purples," who plot to crush the democratic Green Hall Council, restore the empire, with the despotic family of Ulnar on the throne.

Now, Adam Ulnar, wealthy leader of the Purples and uncle of Eric Ulnar, the claimant of the throne, has become commander of the legion. He sent his nephew to the far star Yarkand, where he made an alliance with the weird, monstrous, but highly scientific race he found, the Medusæ, to help crush the democracy. He promised them iron, precious to them.

With the Medusæ's aid, Eric Ulnar abducts Aladoree from her hiding place on Mars. John Star, with three others of her loyal guards, Jay Kalam, Hal Samdu, and Giles Habibula, sets out to rescue her. They find the legion against them, under the traitorous commander; are imprisoned in the Purple Hall, on Phobos, tiny outer moon of Mars.

John Star refuses to desert the Green Hall—though Adam Ulnar offers to make him emperor, instead of Eric. The four escape, through the ventilating system, reach the tower landing stage, seize the Purple Dream, the commander's space cruiser.

Adam Ulnar, captured aboard, reveals that Eric had taken Aladoree to Yarkand; that she is hidden and guarded there by the terrible, inhuman Medusæ, on their planet of strange horror, beyond the weird Belt of Peril.

The four must venture there, to rescue her.

XI.

GILES HABIBULA made queer noises. He gasped, strangled, sputtered. His face, save for the purple protuberance of his nose, had faded to a greenish, sickly pallor. His fat hands trembled as he tilted up the big flagon of wine, cleared his vocal organs sufficiently to permit articulate speech.

"My life!" he sputtered, rolling a fishy eye about the little bridge room. "My mortal life! We can't go there!"

"Probably we can't," John Star agreed soberly. "The chances are against us—a hundred to one, I suppose. But we can try."

"Bless my bones! We can't go there! 'Tis beyond the system—six light years and more! A mortal distance, when it takes a precious ray of light six blessed years to cross it!

"Ah, there're ten thousand mortal dangers, life knows! I'm a brave man—you all know old Giles is brave. But we can't do that. Of all the expeditions that ever went beyond the system, only one ever came back."

A tiny red light glowed suddenly on a telltale screen among the instruments; a warning gong clanged.

"Another legion cruiser," observed Jay Kalam. "Scouring space for the Purple Dream! That makes five in the range of our instruments. Hunting pirates was always a popular sport with the legion."

"And the nearest within a thousand miles," added John Star, with a glance at the indicators. "I hope they don't discover us before we contrive to get the generators repaired and start moving."

"And to Yarkand!" Giles Habibula wheezed on dolefully. "My life's sake, to Yarkand! The expedition the legion sent there had three mortal ships; the best equipment the system could build; full, trained crews. And look what came back, after a whole year!

"One crippled ship! The men on her, most of them, blessed babbling lunatics, chattering like mortal monkeys about the horrors they had found on the planet of Yarkand. And dying of some ill the doctors don't understand—the flesh of their

mortal bodies turning green and flaking off.

"Mortal terrors! And you want us to go to Yarkand, in one blessed little ship, with her *geodynes* already wrecked. Just four men of us, against a whole planet full of bloody monsters!

"You can't ask old Giles Habibula to go to Yarkand. Poor old Giles, half dead from scampering like a blessed rat through the ventilator tubes in the mortal Purple Hall. Old Giles is too feeble for that. If you three idiots want to go to horror and death, you must let poor old Giles off the ship on Mars."

"To be tried and put to death for a pirate?" asked John Star, smiling grimly.

"Don't joke so with old Giles! He's no pirate!"

"The whole legion is hunting us, Giles," Jay Kalam said gravely, "since we took the *Purple Dream*, with the commander. The agents of the legion would soon have you—you'd never disguise that nose!"

"Life's sake, Jay, don't talk so! I hadn't thought of that. But we are blessed pirates now, with the hand of every honest fighting man against us. Ah, every man looks on us with trembling and horror and seeks to strike us down to death!"

His fishy eyes glistened with tears; his wheezing voice broke.

"Poor Giles Habibula, aged and crippled in the loyal service of the legion, now without a place on any planet to rest his mortal head. Hunted through the black, frozen vacuum of desolate space, driven out of the system he has given his years and his strength to defend. Driven out to Yarkand, to face a planet full of inhuman bloody monsters. Ah, me! The ingrate system will regret this injustice to a mortal hero!"

He wiped the tears away, then,

with the back of a great fat hand, and tilted up the flagon.

He had found opportunity for a raid on the galley since they took the ship. His capacious pockets were stuffed with slabs of synthetic legion rations, sweet cakes and fragments of baked ham, which now flowed again toward his mouth in a stream broken only by the visits of the wine flagon to the same destination.

The *Purple Dream* was drifting in space, a hundred thousand miles off the huge, tawny, ochre globe of Mars. Phobos had become a tiny point of greenish light, had been lost among the million, many-hued points that pierced the black sphere of space.

Drifting, helpless, with all signals dead, while the avid fleets of the legion hunted her like hounds of the void.

WITH THE commander, Adam Ulnar, safely locked in the brig, their other prisoners released through the air lock, they had driven the cruiser away from the landing stage on the Purple Hall, out into space, under rocket power.

But a dying engineer—true to the legion tradition against surrender—had thrown a switch, burned out a *geodyne* unit. With generators useless and rockets inadequate to move the vessel fast or far through the hostile immensities of space, with the legion fleets searching for them, the four had gathered in the bridge room to discuss their desperate situation.

"She's in the hands of those monsters?" huge Hal Samdu asked again, his big hands unconsciously knotting. "The monsters the insane men talk of?" A nameless dread came in his simple blue eyes. "Aladoree!"

"Yes. Except that I doubt they're enough like men to have hands."

"With care," began Jay Kalam, "organization——"

"Ah, that's the word!" broke in Giles Habibula. "Organization. Regularity. Four good meals, hot on the moment; twelve hours of good sound sleep. Organization—though a blessed man might still take a cat nap now and then, or a cold bite and a sip of wine between meals."

"There's the matter of navigation," Jay Kalam went on. "I know the rudiments, of course, but——"

He looked doubtfully about, at the walls of the bridge room, bewilderingly crowded with all the shining, intricate mechanism of telescopic periscopes, meteor deflectors, rocket firing keys, *geodyne* controls, gyroscope space compasses, magnetic detectors, star charts, planetary maps, position, velocity, and gravitation calculators, atmosphere and temperature gauges—all the apparatus for the not-altogether-simple business of taking the cruiser safely from planet to planet.

"I can handle her," offered John Star quietly.

"Good! Then we must have an engineer. To repair the *geodynes*—we *must* somehow get them repaired—and run them."

Giles Habibula grunted, sputtered crumbs, failed to speak.

"That's right, Giles. I'd forgotten that you were a qualified technician."

"Life, yes, I can run the mortal *geodynes*. Giles Habibula can fight, when fighting has to be done, old and lame and feeble as he is. Ah, me, no man is braver than old Giles—all of you know that. But as a matter of choice, I'd always stick to my blessed generators. It's safer—

and there's no cowardice in a mortal bit of caution."

"You can fix the burned-out unit?"

"Ah, yes, I can rewind the thing," promised the new engineer. "But it will be blessed hard to synchronize with the others. Those mortal units are matched when they are made. When one is off balance, it makes the whole precious system mortal hard to tune. But I'll do my blessed best."

"And, Hal," went on Jay Kalam, "you've been a proton gunner. You can handle the big proton blast needle, if one of these ships stumbles on us—though we can't afford a fight, with less than half a crew in a crippled ship."

"Yes; I can do that," said the gigantic Hal Samdu. "That's simple. I can do it."

"That leaves you, Jay," spoke up John Star. "We need you to do just what you're doing now—plan, organize. You will be our commander."

"No——" he had begun a modest objection, when Hal Samdu and Giles Habibula added their voices, and he became captain of the *Purple Dream*.

The new officer gave his first orders immediately, with the same gravely quiet manner he always had.

"Then, Giles, please get the *geodynes* into operation as soon as you can—our only chance is to get away before one of these ships stumbles on us and calls the rest of the fleet to wipe us out."

"Very good, sir!"

Giles Habibula threw back his head, held up the flagon until the last drop had trickled from it, saluted, rolled out of the bridge room.

"John, you may be plotting our course. First we must outrun these ships around us, of course. We'll keep above the asteroid belt, and

well away from Jupiter and Saturn and Uranus, with their legion bases—we can't risk running into another fleet. We'll pass under the orbit of Neptune, close by Pluto, and on toward Yarkand."

"Very good!"

"Hal, if you please, examine the proton needle, see that it's ready."

"Yes, Jay."

"And I shall keep watch."

"How many, now?" asked Jay Kalam, hours later.

They were still drifting helpless in the void. John Star looked at the betraying red sparks on the telltale screen and answered slowly:

"Seven. And I believe—I believe, Jay, they've found us!"

"They have?"

Intently he studied the instruments, said at last in a voice edged with apprehension:

"Yes. They've found us. They're moving on us, all seven."

Jay Kalam spoke into his telephone: "Hal, stand by for action. Yes, seven legion cruisers, all converging on us." He gave positions.

"Giles, the *geodynes*? Not ready yet? And you can't depend on the rewound unit? They've seen us. We must move soon, or never."

In a few minutes the nearest cruiser came into range, or almost into range, of the proton blast. Jay Kalam spoke into the telephone, and a tongue of blinding violet darted out from the great needle in its turret above.

"It's drawing back," whispered John Star, his eyes fastened to a tele-periscope. "To wait for the others. But they'll all soon be closing in."

"Ah, Jay, we can try them," whistled Giles Habibula's voice from the receiver, thin and shrill. "Though the mortal unit——"

Jay Kalam nodded, sharply. John

Star turned to his dials and keys. The musical humming of the *geodynes* rose, filled the ship with a song of power. Swiftly he advanced them to their utmost output; their sound became higher, keener, until it was a vibrant whining that thrilled every member of the ship.

"Away!" he cried exultantly. "Away to help Aladoree!"

HIS EYES on the dials, on the red flecks glowing on the telltale screen, John Star saw that the *Purple Dream* was moving, flashing away from the center of the little swarm of hostile vessels. His own heart responded to the keening whine of the generators; he could almost feel the terrific thrust of the *geodynes* that sent them plunging away.

"We're gone!" he cried again. "Off for Yarkand! Away to——"

His voice fell. Another note had broken the keen musical whine of the generators—a coarse, nerve-jarring vibration.

Giles Habibula's voice came from the receiver, tiny, metallic:

"Ah, these blessed generators! I rewound the unit. But they're off balance. Won't stay synchronized. The oscillation will creep back. It bleeds away the power, and it may shake the mortal ship to fragments!"

"We've lost speed," John Star reported apprehensively from the instruments. "The legion ships are gaining."

"Adjust them, please, Giles," Jay Kalam pleaded into the telephone. "Everything depends on you."

The *Purple Dream* flashed on, gaining upon the seven pursuing ships when the *geodynes* hummed clear and keen, but always losing, falling sluggishly back, when the harsh, disturbing vibration returned.

John Star studied his instruments long and anxiously.

"We're holding them just about even," he decided at last. "We can keep ahead so long as the generators do no worse—though we can't escape them altogether. Anyhow, we can say farewell to the Sun and the system. Even if they follow us out—"

"No," Jay Kalam objected quietly, "we aren't ready yet to leave."

"What's the matter?"

"We must have fuel for the trip to Yarkand. We must have every foot of space on board packed with extra cathode plates for the *geodyne* generators. And, of course, we must check the supplies for ourselves—food and oxygen."

John Star nodded slowly. "I knew we needed a captain. Where can—"

"We must land at some legion base and get what we need."

"At a legion base? With all the legion fleets hunting us for pirates? The alarm will be spread to the limits of the system!"

"We'll land," Jay Kalam said, with his usual quiet gravity, "at the base on Pluto's moon. That is the farthest on our way and the most isolated legion station in the system."

"But even it will be warned and armed."

"I know. But we must have supplies. And we're pirates. We shall take what we need."

XII.

IT WAS FIVE days' flight to Pluto, most distant outpost of the system; so far that even its sun was but a bright star, its daylight eternal twilight.

Five days—with the full power of the *geodynes*, whose fields of force reacted against the curvature of space itself, warped it, so that they

drove the ship not through space, to put it very crudely, but around it, making possible terrific accelerations without any discomfort to passengers, speeds far beyond even that of light. Speeds, a mathematician would hasten to add, as measured in the ordinary space that the vessel went *around*; both acceleration and velocity being quite moderate in the hyperspace it really went *through*.

Giles Habibula nursed the hard-driven generators with amazing care and energy; his thick hands proved to have an astounding sureness and delicacy and skill; and he had an enormous respect for the ever-increasing swarm of legion cruisers racing astern, with their threat of successfully prosecuted charges of piracy, if not immediate destruction of the *Purple Dream* and all on board in the consuming flame of their proton blasts.

He adjusted the injured unit until it was all but perfect. For an hour at a time, perhaps, the song of the generators would be clear and keen—but always the harsh discord of the destructive vibration returned.

One by one, the far-flying patrol cruisers of the legion had joined the pursuing fleet, until sixteen ships were chasing the *Purple Dream*. But, little by little, they were left behind, until, near Pluto, John Star estimated them to be nearly five hours astern.

Five hours, that meant, in which to land at the hostile base, overcome its crew, force them to bring aboard some twenty tons of supplies, and get safely away into space again!

In those days of the flight, John Star found himself thinking often of Aladoree Anthar—and his thoughts were sweet music and agony. Strange, lovely girl; though he had known her but a day, memory of her brought a glow of joy to him,

and a throb of pain at thought of her helplessness in the clutches of the weirdly dreadful Medusæ!

THE PURPLE DREAM hurtled down on Pluto's moon.

Pluto itself, the Black Planet, was a barren, lonely world, its frozen mountainous deserts inhabited only by a few miners, mostly hardy descendants of the political prisoners exiled there under the empire, strange denizens of eternal frigid gloom.

The moon of Pluto was a cragged, tiny sphere of lifeless rock, more desolate, crueller to man, than the dark planet itself. It was not inhabited, save by the crew of the lonely legion station.

John Star had feared that, after the ultra-wave radio warning that had gone ahead, a detachment of the fleet would be waiting at the base, but the station seemed deserted as they dropped.

A square field, leveled, between ragged black pinnacles. A long, low building, beside it, of cold white metal—barracks and storerooms. The thin, spidery tower of the ultra-wave radio station on a peak above it. Beyond, rugged black desolation; wild mountains, crater-scarred, cracked, riven, blasted.

In officer's uniform, John Star stepped out into the frigid, thin air, upon the little deck formed by the lowered outer valve. Assuming an air of brisk confidence that his feelings hardly justified, he waited while two men approached the cruiser from the long building.

"Pluto station, ahoy!" he hailed them, his manner as sternly official as possible.

"*Purple Dream*, ahoy!" one of them responded doubtfully—a short man, very bald, very stout, very red of face, his soiled uniform showing

the careless neglect that sometimes comes of long isolation.

"I am Officer John Ulnar," John Star said briskly. "*The Purple Dream* requires supplies. Captain Kalam is making out the requisitions. They must be aboard without delay."

"John Ulnar?" the short man repeated, his voice sullen, suspicious. "And Kalam? *The Purple Dream* is officered by Madlok and Commander Adam Ulnar."

"There has been a change of command," John Star informed him curtly. "Here is Captain Kalam."

Jay Kalam appeared beside him, in another borrowed uniform. They descended to meet the men from the station, who had stopped doubtfully below the air lock.

Jay Kalam offered a document, said sharply: "Here is what we require, captain."

Above their heads, the long, shimmering needle of the ship's great proton gun was thrust out of its little turret, swung above their heads to cover the barracks; Hal Samdu was at his post.

The short man looked at it uncertainly, with small, bloodshot eyes; looked back at Jay Kalam, unwillingly took the requisition.

"Sixteen tons of cathode plates!" he exclaimed. "Not for one ship, surely!"

"Sixteen tons. They must be aboard immediately."

"It will be impossible," muttered the short man doubtfully, "for me to load them without first reporting to legion headquarters for special orders."

"This is an emergency——"

"I am Captain Hosea Nana, of Pluto station. I am not accustomed to accepting orders from——" he paused, his bloodshot eyes narrowed before he finished—"from pirates."

"However, Captain Nana," Jay Kalam told him evenly, in his usual grave, low voice, "in this case I should advise you to do so without any delay."

The short man's face went from red to purple; he choked:

"So you admit you're trying to rob my base? I'll hold you till the fleet comes and see the last one of you toasted to a crisp with a proton gun!"

"You aren't," Jay Kalam observed, "in a position to hold us."

He looked back at Hal Samdu's turret, pointed at the tower of the ultra-wave radio station on the peak. Hissing, roaring, an intense jet of incandescent electric flame leaped from the slender needle above their heads. A sword of blinding violet, it touched the spidery tower, hurled it down in twisted, half-fused ruins.

Captain Nana was suddenly trembling; his round face went from purple back to white—his anger, apparently, had been three parts terror.

"Very well, Captain Kalam," he whispered hoarsely; "the supplies will be loaded at once."

"Go with him, Mr. Ulnar," said Jay Kalam. "See that there is no mistake or delay."

CAPTAIN NANA complained that he did not have all the supplies required; that most of his men were too ill to help with the loading; that the cranes and conveyors were out of order. He was doing his utmost, John Star recognized, to delay them until the sixteen racing legion cruisers should have time to arrive.

Yet with John Star's stern alertness and the menace of the great proton gun, all the cathode plates were aboard four hours later, the cylinders of fresh oxygen for the ventilation system, and the supplies

of food and wine that Giles Habibula had added to the requisitions. Only the black drums of rocket fuel remained piled beneath the air lock, and it was still an hour before the pursuing ships should reach them. Yet John Star had caught a gleam of sinister triumph in Captain Nana's piglike eyes that made him uneasy.

Jay Kalam appeared, then, from the bridge, hurried, tense. "We must take off, John, at once!" he said, his voice low.

"Why? We've an hour——"

"I see another ship coming. From Pluto. It must have been waiting there."

"But we'll need this rocket fuel. We can take a chance on outrunning it."

"This isn't a legion cruiser, John. And it's coming faster than we can move. Faster than we could with perfect generators."

"Not a legion ship?"

"Never saw one like it. Black, strange, gigantic. It has black wings, or vanes. The Medusæ——"

"It is!" cried John Star, recalling the weird, colossal black flier that had carried away Aladoree in the power of his traitorous kinsman. "A ship from Yarkand! I don't know what weapons——"

"Anyhow, we must go. Can't risk fighting!"

"The rocket fuel?"

"Leave it. Come on aboard."

They hurried up the accommodation ladder.

"Leaving, already?" Captain Nana called after them, an unpleasant hint of gloating in his thick voice. And insolently he demanded a receipt for the supplies they had taken. John Star curtly refused, and he vanished with his men toward the long building with a haste that was ominous.

The air lock sealed, levers flicked

down under John Star's fingers. Blue flame should have screamed from the rockets, sent them plunging away from the black field. But the *Purple Dream* did not move.

Puzzled, dismayed, he tried the firing keys again. Nothing happened.

"We're somehow stuck. Rockets won't fire!"

In alarmed incredulity he scanned the dials.

"Magnetism!" he whispered. "Look at the indicators! A terrific field. But how—— The ship is non-magnetic. I don't see——"

"A magnetic trap," said Jay Kalam. "Colossal magnets, under the field. Our hull is nonmagnetic; but the field holds the rocket-firing mechanism and the *geodynes* out of control. Nana is trying to hold us until the ships get here. And that black ship, plunging down from Pluto——"

"Then," broke in John Star, "we must stop their dynamos!"

"Hal," Jay Kalam spoke into his telephone, "destroy the building."

The tongue of roaring violet flame reached again from the shining needle, swept the long, low metal building from end to end, left a flattened, twisted mass of smoking metal, flung off its foundations by the sheer thrust of the blast.

"Now!"

Again John Star tried the rockets; again only silence answered.

"The magnets still hold us. The dynamos must be underground, where our blast didn't reach them."

"I can, then!" cried John Star. "Open the lock."

He snatched two hand proton guns, besides the two in his belt already, darted out of the bridge room.

"Wait!" called Jay Kalam. "What are you doing?"

But he was already gone; Jay Kalam touched the controls to open the valve for him.

He dropped to the field, ran across to the smoking wreckage of the long building, searched the bare foundations until he found the stair, a shaft hewn in dark rock. Down the steps he plunged, proton guns in his hands, leaping stray fragments of hot metal.

A hundred feet below, in silent, menacing gloom, a heavy metal door loomed in front of him. He turned a proton blast on it at full force. It flashed incandescent, sagged, was driven in. He leaped over it, ran into a long, dimly lighted hall, discarding the gun with its cell exhausted by the one terrific blast.

Another heavy door—machinery drummed behind it. He ran toward it, and a violet lance stabbed at him from a tiny wicket.

Alert for it, he flung his body under it, flat on his stomach. Even though he escaped the searing ray, the conducted shock of it numbed him. Yet his own proton gun flashed at the same instant, and the glowing wreck of the door was flung back upon the man behind it.

On his feet at once, though his shoulder was blistered, throbbing, he sprang for the door, tossing away his discharged gun and snatching the two from his belt.

A square room was before him, rock-hewn, great dynamos humming in the center of it. Five men stood about it in attitudes of petrified dismay, only Captain Nana's hand groping mechanically for his weapon.

Both John Star's guns flamed—at the generators!

Unarmed now, but sure the dynamos were wrecked, he flung his discharged guns in Captain Nana's face, ran back down the hall and up

the stair, hoping surprise would give him time to get back aboard.

It did. Air lock closed again, rockets washing black pinnacles with blue flame, the *Purple Dream* flashed upward from Pluto's cragged moon—off at last, John Star exulted savagely, off at last for far Yarkand, to the aid of Aladoree!

"The delay—" whispered Jay Kalam. "Fatal, I'm afraid. The black flier is close—we can hardly escape it, now!"

XIII.

THE MOON of Pluto fell behind, a cold gray speck, and vanished.

The Black Planet itself was swallowed in the infinite black abyss, near the bright, tiny pin point of the dwindling Sun.

Out, beyond the system, beyond the little worlds of man, beyond the small domain of the Sun, the *Purple Dream* was flashing, toward remote Yarkand and its solitary world of shadowy horror.

Giles Habibula lived, now, in the generator room. Under the continual care of his fat, oddly steady hands, the *geodynes* ran almost perfectly, the ominous vibration sometimes unheard for hours at a time.

Racing day after day at the utmost speed of straining generators, the cruiser kept ahead of the strange, colossal black flier—just ahead.

"It keeps always just the same distance behind," said John Star once, watching the faint red fleck on the telltale screen that marked the other ship's location. "No matter how fast we go, we never gain an inch!"

"They're just following us," said Jay Kalam, worry apparent even in his calm tones. "They can catch us when they like. They're just waiting."

"Playing with us!" muttered John Star.

"Merely waiting, perhaps, to see what we intend to do. Or, perhaps, for a chance to take back the commander alive."

"If we could give them the slip!"

Jay Kalam shook his head. "There's no way."

On they drove, into the frozen, star-gemmed chasm of darkness.

All four of them were haggard from sleeplessness, from the tension of endless, futile effort; only Jay Kalam appeared almost unchanged, still grave, calm, deliberate. John Star's face was white, his eyes burning with anxiety. Hal Samdu, nervous, irritable, muttered to himself, knotted his great hands, glared at imaginary enemies. Giles Habibula, incredibly, lost weight until the skin hung in pouches under his hollow eyes.

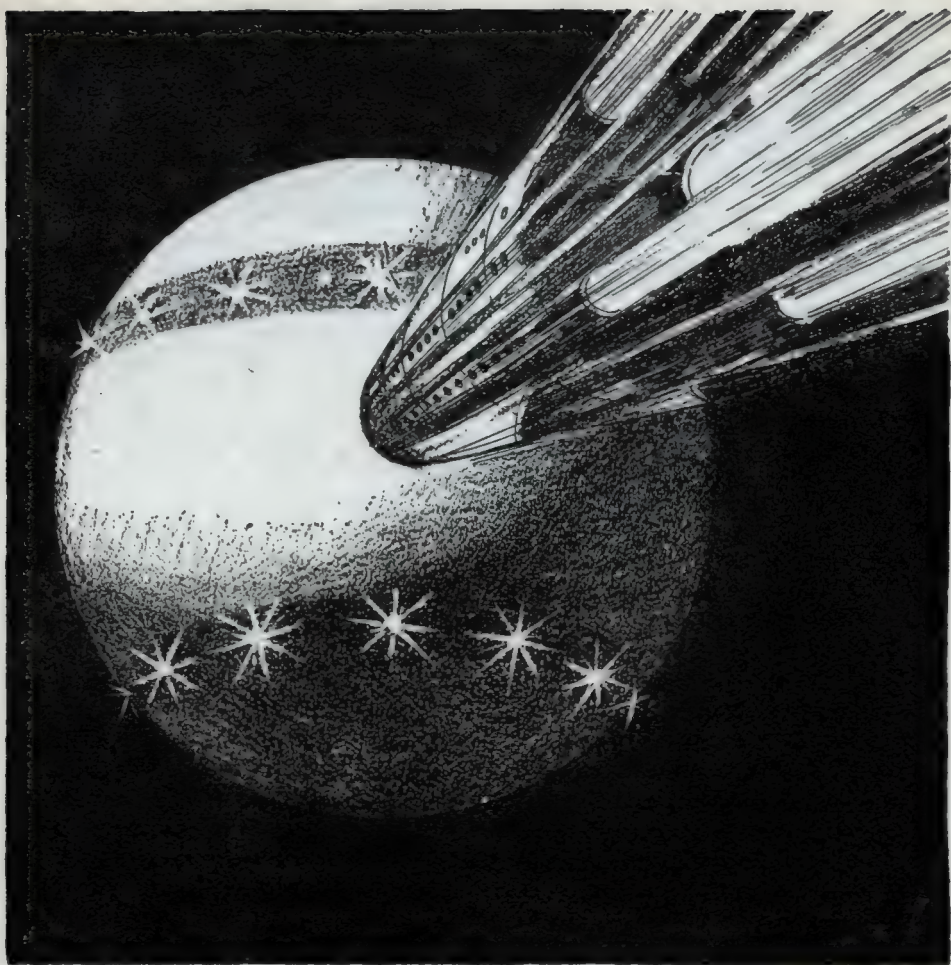
Day by day the Sun grew smaller, fainter, until it was a dim star, lost at last among the myriads of the firmament.

Yarkand appeared and grew.

YARKAND! Red, feeble, dying sun, located in the constellation Ophiuchus, near the Serpent, near red Antares in the Scorpion. The third most distant star from the Sun, the nearest found to have a habitable planet. Once called "Barnard's Run-away Star," from its discoverer, its remarkable proper motion of one hundred and sixty-two miles per second.

Yarkand, its strange planet a weird domain of horror, ruled by monstrosities of insensate evil, babbled and shrieked of by the insane, dying members of the first expedition, dying of an ill that medicine could not understand or heal.

John Star was watching it one day; a dull, mad, red eye of evil, glaring at him from the tele-periscope. Staring, while he wondered,



At last they were nearing the strange planet of the Medusæ, encircled by its glittering Belt of Peril.

blankly, vainly, what might have been the fate of the lovely girl imprisoned on it. What a wrong it was that Aladoree should have been brought here! What an unthinkable wrong that her clear, honest gray eyes should be distended with horror and filmed with soul-searing fear!

He started when Jay Kalam spoke:

"Look! Ahead of us, in space. A green shadow!"

Even then his low, restrained

voice was tense with the fear of something utterly unknown.

A vast greenish cloud, it appeared through the tele-periscopes. It shone with the green of *nebulium*—that strange gas known only in *nebulæ*. It was angry, swirling; it writhed almost like a monstrous, shapeless thing; through it surged titanic currents.

"A cosmic cloud," said Jay Kalam. "A nebula."

"Must be," agreed John Star, fighting his awe at its ominous

splendor and its terrific, overwhelming magnitude. "I'll change our course at once. It looks like an excellent thing to avoid."

"No," Jay Kalam protested quietly. "Drive on toward it. I want to skirt it."

"Yes?" He obeyed, wondering.

ENORMOUSLY it expanded as they flashed on, spread out its vast, dimly shining masses to fill the black abyss ahead. A strange, ominous, stupendous thing; titanic clouds of gas, of cosmic dust, of meteoric fragments, faintly lighted with the green flame of *nebulium*.

Presently they were flashing along beside it, the black flier still following at the same fixed distance; past vast streamers that flowed like the pseudopods of some monstrous amoeba, avid to engulf them; past titanic wings of green flame.

"If it caught us——" muttered John Star, awe-struck, staring at it. "Those meteor streams—hurtling boulders! Those whirlpools of flaming gas! If it caught us——" He wiped sweat off his tense face. "We wouldn't live five minutes!"

"We may not, anyhow," observed Jay Kalam, grimly quiet.

"How's that?"

He pointed to the instruments. "The black ship is overtaking us. Afraid to follow too close to the nebulae, I suppose. And don't intend to let us get away."

"So that's why!" cried John Star. "I see why you wanted to skirt it!"

"It gives us a chance. Giles is nursing the *geodynes*. Hal is standing by the proton gun. I don't know what weapons they have, or how far they will dare follow."

He turned a tele-periscope on the black flier so swiftly overtaking them. It was a colossal thing. The rods and vanes about the central

spherical body were like wings and grotesque limbs. The vanes were moving a little as it came, as if they reacted against some unseen medium to control its flight.

"We'll reach the nebula ahead——" he was muttering, when his heart sickened.

The clean, clear whine of the *geodynes* was singing through all the ship, sharp and strong; he could almost feel the terrific power that sent them hurtling ahead. But now the harsh, nerve-racking vibration came back; their speed slackened; the black ship visibly gained.

"Their weapon——" Jay Kalam whispered, deadly calm. "We'll soon know——"

Something came hurtling toward them from the immense machine, a little misty glow of white. It grew larger as it came, and it froze them with the wonder and the terror of the utterly inexplicable.

A ball of opalescence, a swirling globe of milky flame, it shone with a strange light, white, sparkling with prismatic glints. It swelled as it came. It filled space behind them, blotting out the star-swept void.

A glowing sun flung at them! A titanic sphere of opalescent flame! It drew them!

The *Purple Dream* lurched, rolled toward it.

Dizziness, nausea, intolerable vertigo overwhelmed John Star. He staggered, grasped at a handrail, clung to it, sick and trembling, while the ship spun, helpless, in the strange attraction of the opalescent sun.

Almost they had been drawn into its milky, prismatic flame, when it vanished in a blinding explosion of white. Black space was about them again, John Star's amazing sickness ended, the cruiser again responded to her controls.

"Never felt—such a thing!" he gasped. "Space itself—dropped from underneath!"

"A sort of vortex of disintegration, apparently," whispered Jay Kalam. "Titanic fields of force, drawing us into it! Twisting space itself, I imagine, from the way the *geodynes* failed. Our proton blast can't meet that!"

"Not when they begin throwing suns at us!"

"One thing to do—dive straight into the nebula."

"Into it?" He started at the low-voiced, grave command. "Into that awful cloud? The odds are a thousand to one——"

"Out here," Jay Kalam said calmly, "they are a thousand to none! The *Medusæ* are trying another shot."

"Another——"

"But I don't think they will follow. Put her straight into the cloud."

ONE INSTANT John Star was rigid at the controls, his mind filled with a picture of the cosmic cloud, a titanic, turbid, angry mass, lighted by weird lights of green, torn by savage etheric currents. One instant, and he had accepted the danger, sent the *Purple Dream* plunging toward the madly swirling clouds of green.

Again a glow of white grew into a sun of opalescent fire hurled after them; again the cruiser pitched and spun, helpless in the grip of its stupendous fields of force; again John Star was strangely, amazingly sick, with such vertigo as he had never previously felt.

But the abrupt turn had saved them; the fearful globe of destroying flame exploded before it reached them; the space cruiser plunged

ahead again, was buffeted by the nearest green arm of the nebula.

The repulsion screens of the meteor deflector served to protect the hull from meteoric particles—if they were not too large, too numerous, or approaching too swiftly. For the rest, the life of the ship depended on John Star's skill.

The *Purple Dream*, with his fingers on the keys, spun, twisted, paused, darted forward, threading a swift and perilous way through the mazes of the nebula.

Sheets of green flame flashed ahead, gigantic vortexes of incandescent gas; powerful currents of etheric force sucked and strained against the fighting ship; gigantic masses of stone came plunging at her.

Right or left, up or down, John Star drove her with sure, merciless fingers. Alarms rang continually, vainly. The telltale screens were a useless blaze of red. Jay Kalam, clinging to the handrail, unable to stand alone in the spinning bridge room, gasped:

"No—no—I think they won't follow!"

The smooth, keening song of the *geodynes*, a moment later, gave way to the old, heartbreaking vibration.

The speed of the cruiser slackened; a hurtling rock that she was too slow to avoid drove through the screen, struck the hull with a terrific clang that reverberated through the ship like the very knell of doom.

Ahead appeared a titanic sudden vortex of incandescent gas; a fearful force caught the *Purple Dream*, sent her, twisting, helpless, toward the fiery heart of the cosmic whirlpool.

"Giles," appealed Jay Kalam, "we must have power."

"Sick!" returned the abstracted, plaintive voice from the receiver.

"Old Giles is mortal ill. This blessed spinning——"

Nearer, nearer, was the flaming core of the vortex. Inferno of green incandescence! Gigantic ragged boulders were swept into it, ahead of them, crushed to fragments against one another, glowed abruptly white, vanished in virescent flame.

Under John Star's hands the little cruiser fought doggedly, vainly, against the mighty current sucking her into the whirl. Still the harsh vibration filled the ship, a harrowing growl of doom.

"Ah, my mortal, dizzy head!" came the faint voice of Giles Habibula. "Sick, sick, sick! And dying like a dog in a flaming whirlpool in the heart of a blessed nebula! Ah, there!"

The *geodynes*, abruptly, were humming clear and strong again.

The *Purple Dream* leaped forward, battled the savage current that dragged her toward crashing, fiery destruction in the supernal fury of the vortex. Battled—and won!

She plunged through a last pale streamer of greenly lighted cosmic dust; and ahead was the clear darkness of space.

"Safe!" exulted John Star, looking back at the green streamers of the nebula, spread like the tentacles of some monstrous creature reaching to draw them back.

"Safe!" repeated Jay Kalam gravely, with a slow, ironic smile. "Safe! And there ahead is Yarkand."

John Star looked at the feeble, dying sun, a scarlet, solitary eye, watching them with unblinking menace.

"Yarkand," Jay Kalam went on quietly, with a grim little smile. "With its one planet, where Eric Ulnar and his *Medusæ* are guarding

Aladoree from us. Yes, we're safe—and ahead of us is the zone of danger the monsters set up to guard their world, the barrier the insane men scream of. Of course, we're safe!"

XIV.

"WELCOME, John," Adam Ulnar called from the cruiser's brig, where he had been locked since they left Phobos. He stood up, smiling, in the little cell, tall, erect, handsomely distinguished as ever. Suavely ironic, he added: "Come in. Stay as long as you like."

"We've a question to ask you, Adam Ulnar," said John Star.

Jay Kalam had come with him from the bridge room.

"I appear to be at your disposal, gentlemen." He smiled. "Rough times, we've been having, by the feel of the ship."

"But rougher ones ahead," said John Star. "Or I imagine so. But what do you know of the Belt of Peril?"

The question had rather a remarkable effect on Adam Ulnar. His face became unsmiling, rigidly masklike; and John Star detected something like consternation behind the mask. His hands clenched unconsciously on the bars of the cell.

"The Belt of Peril?" He spoke with visible effort. "Already—we're near Yarkand?"

His voice had grown tense, uncertain; there was dismay in it.

"Yes. The survivors of the first expedition spoke of a Belt of Peril. What is it? How can we get through?"

"I don't know what it is," Adam Ulnar said slowly, his fine eyes shadowed with fear. "I don't know. Even after Eric had made his alliance with the *Medusæ*, they didn't tell him, though they let him safely

through on the way back to the system.

"But it's something—dreadful! Two of the ships were lost in it, as the expedition approached the planet. And Eric's got through, I believe, because the Medusæ thought it might prove less useful destroyed than not."

"You don't know what it is?"

"No. Something they set up to guard the planet, like a ring of forts in space. The force of it is radiant. It causes electronic changes—very strange ones! Disintegration, I think. But the precise nature of it, or how to avoid it, I don't know."

"Thank you, Adam Ulnar."

They turned away, and the tense voice called after them, frightened:

"Wait! You can't plunge into it! Not into the Belt of Peril."

"We're running through it," John Star assured him.

"We shall try," added Jay Kalam, "to get through at a very high speed, by surprise, or before the radiant force you mention has time to act."

"Then, John," came the shaky voice, "I've a request to make of you."

"What's that?"

"We're kinsmen, John. And, though we happen not to agree, I've done something for you. The academy, you recall."

"Yes. What is it?" The pleading, uncertain manner had softened his tone.

"John, we are certain to die in the Belt of Peril, if you insist on diving into it. And I understand that it is a peculiarly unpleasant death. I wish, John—I wish you'd give me the euthanasia."

"You want to die?"

"I'd rather, John, than enter the Belt of Peril alive."

"You can communicate with the Medusæ?" asked Jay Kalam gravely.

"Yes, I can. Why——"

"Then we must refuse the request. We may need you, Adam Ulnar, to help undo the thing you have done."

Yarkand burned on the right, a swelling, perfect sphere, sharp-edged against the ebon chasm of space. Blood-red, intense, its rays smote to the very brain with a disconcerting sense of horror and doom.

Straight ahead was the solitary planet that circled it, a smaller, darker globe. It also was red, a dull, smoky orange-red.

The *Purple Dream* plunged toward it, *geodynes* still humming keen and high. At the tele-periscopes John Star and Jay Kalam watched for the first glimpse of the dreaded zone of danger.

The dull, yellow-red ball swelled against the star-flung black abyss as they dropped; it was a gigantic world, John Star realized, many times the bulk of Earth.

"I see it," whispered Jay Kalam. "Blue. Like a double ring of sapphires."

John Star saw the barrier, then; the Belt of Peril.

Tiny points of blue, forming twin rings about the cloudy, crimson world; one about each hemisphere, above and below the equator, thirteen in each ring, twenty-six in all.

Orange-red ball and hard blue points expanded as the cruiser drove down at reckless speed. The points became flashing stars of sapphire. Colossal, star-shaped structures of blue crystal, John Star saw, examining one with the highest power of his instrument; gigantic crystal shapes of cold blue flame.

Frozen light burned within them, flashed out in cold, thin rays, narrow pencils of hard, diamond radiance, that wove an unbroken net

about the scarlet planet from pole to pole.

The Medusæ's world assumed a sinister and awful splendor as they fell nearer.

THE GIGANTIC globe of dim, cloudy yellow-red hung against the utter black of space, twin rings of colossal sapphires encircling it, flinging from their cold facets a web of diamond rays that veiled the sullen-hued planet in supernal splendor.

"The thing," whispered John Star, "is—beautiful!"

"Beautiful," agreed Jay Kalam, "like a deadly snake, or the crystals of some horrible poison. It both fascinates and repels."

"Think of Aladoree, down there," breathed John Star. "Beyond—that! Hidden, guarded, and tortured, I suppose, for her secret. We must get through!"

"We must!"

And Jay Kalam spoke quiet orders into his telephone.

"Mortal me!" appealed a voice, plaintively thin. "Can't we have a blessed moment of time, before we go plunging into the awful thing? Just time to snatch a bite to eat?"

"No, Giles. In minutes now——"

"Can't poor old Giles have time even for a mortal sip of wine before he dies? A poor old soldier of the legion, dead on his feet from toiling day and night, starving to death for want of time to eat! Unjustly accused, hunted out of his native system for a blessed pirate, driven to his death in the mortal horrors of an unknown planet! Poor old——"

John Star was listening no longer. He had seen a strange thing. Something was happening to the ship—and to his own body.

The metal walls, the instruments about him, were suddenly luminous,

shining with prismatic radiance. His own skin was shining.

Infinitely small luminescent atoms, it seemed, were dancing away from the walls of the room—tiny, vibrant motes, red, orange, yellow, green and blue, indigo and violet. They swirled away from the curiously shining walls, filled the room swiftly with a throbbing, sparkling, rainbow-colored mist.

The strange, glittering particles, he saw, were streaming away from his own body.

Then he felt it. A sheet of blinding pain.

It wrapped him; from it stabbed a million merciless needles.

A moment he gave way to it, sick and reeling, eyes closed. Then he fought to control himself, turned unsteadily to Jay Kalam, a shimmering specter clothed in a mist of molten rainbows.

"Feels—" through clenched teeth, he gasped—"like every nerve—eaten away!"

"That's it," he heard the specter's voice, hoarse and faint with pain. "Particles dancing away—radiation—beating through us—disintegrating—our bodies—nerves being destroyed—stimulated."

"How long——"

His voice went out. Agony beat against his brain in great surges. Every limb, every tissue of his body, shrieked with pain. Even the cells of his brain itself screamed protest at the radiation consuming them.

Every second it seemed that his suffering must be the ultimate—every second it increased.

He was blind with pain. Pain roared in his ears. Red-hot needles of pain probed every fiber of his body. Still he fought to keep mastery of himself, to keep the cruiser plunging ahead.

Above the agony thundering in
AST-8

his ears, he heard the whine of the hard-pushed *geodynes* change again to the harsh, vibrating note. The vibration increased, the whole ship trembled with it. It became terrific; he clutched at a handrail, thinking the ship must fly to fragments under the torture.

It ceased abruptly. The cruiser was silent. The *geodynes* at last had failed completely. Now only momentum remained to carry them through the radiation wall. Would it—in time? He feared not.

In the new silence he heard Adam Ulnar's voice from the brig, a thin scream of utter agony.

"Disintegration——" came the faint, hoarse rasp from Jay Kalam. "Invisible——"

He saw, then, that the solid metal of the mechanisms about him was becoming weirdly and incredibly semitransparent, as if about to dissolve completely in the glittering mist that swirled away from them, ever denser.

He looked at Jay Kalam, through the haze of shattered jewels, and saw a strange, a fearful thing.

A specter in earnest, now, semitransparent, bones visible like shadows within misty outlines of flesh. Fiery smoke swirling away from it. It looked no longer a man, but a grim shadow, melting into prismatic mist.

Yet it still had consciousness, reason, will. A sound whispered from it, dry and faint: "Rockets!"

John Star knew that he was another dissolving ghost. Every atom of his body flamed with unendurable pain. Red agony blinded him, thundered in his ears, froze his body in rigid walls. Yet he moved, before it overcame him utterly.

He reached the rocket firing keys.

He was sprawled over the control board, the next he knew, limp, trem-

bling, his sick body oddly weak, dripping with sweat. He dragged himself up, aware that his weird, agonizing transparency was gone; saw Jay Kalam, faint and white; saw beyond him a few glistening diamond particles still floating in the air.

"The rockets," breathed Jay Kalam, his voice weak, uncertain, but gravely deliberate as ever, "the rockets brought us through."

"Through!" It was a dry, hoarse croak. "Inside the Belt?"

"Inside! And plunging toward the planet's surface."

He fought to recover a grip on himself.

"We must check our motion before we smash!"

"Giles!" Jay Kalam called into the telephone. "The *geodynes*——"

"It's no mortal use," wheezed the plaintive protest. "Old Giles is dying, dying! The blessed agony of it! And the generators are wrecked, burned up! That awful vibration. They can never be repaired!"

"One old soldier, against all the legion, and the blessed dangers of space, and the precious monsters of a world of bloody horror——"

"The *geodynes*——"

"Ah, the mortal things are finished, I tell you. Done!"

"He means it," said Jay Kalam. "The *geodynes* are gone. We've only the rockets to keep us from smashing to smoke on Yarkand."

John Star dragged himself grimly to the firing keys, muttered: "Now is when we need the fuel we left on Pluto's moon!"

XV.

DOWN UPON the huge, expanding, yellow-red planet the *Purple Dream* was hurtling, rocket blasts thundering forward at full power to

check her flight—if it could be checked short of catastrophe.

Jay Kalam watched, gravely anxious, as John Star swiftly took the readings from a score of instruments, set them up on the calculators, snapped down a button.

"What do you find?"

"A close thing," John Star said slowly, at last. "Uncomfortably close. At very nearly the same time, three things will happen. Our forward momentum will be checked. We shall approach the surface of the planet. The rockets will go dead for want of fuel.

"But that thick red atmosphere hides the planet's surface—I can't tell exactly where it is. If it's too near, we smash against it like a meteor, before our fall is checked. If too far, the fuel will be exhausted, we plunge down again, helpless."

"Then," Jay Kalam observed calmly, "we must await the event. How long have we?"

"It's about two hours, until those three things happen."

"And nothing we can do?"

"Nothing. Except keep the rockets at full power."

"A black flier!" announced Jay Kalam, a moment later. "Out to watch the pyrotechnics when we hit. We gave the alarm, I suppose, when we entered the Belt of Peril."

John Star picked it up in a teleperiscope—a complex, gigantic mechanism of glistening, ebon metal; wide black vanes moving, oddly slow, above the immense sphere of its body. Not far above, it was merely keeping pace with their fall, making no hostile move.

"Just waiting to watch us smash!" he muttered grimly. "Or to pick us off if we don't!"

"I'm going to get Adam Ulnar," Jay Kalam said abruptly. "He said he could communicate with them.

I'm going to let him try. Might get some scrap of information. Or negotiate some advantage, for his release."

John Star nodded. He left the bridge, returned with Adam Ulnar before him, still white and shaken from the experience in the Belt of Peril.

"You're willing to try to communicate?"

"Yes, John. We're falling, you say, near the planet, with generators useless and a black flier near?"

"That's the situation."

"Then I'll offer you a proposition."

"What's that?"

"Our lives, if the ship continues to fall, aren't worth much?"

"Agreed! What then?"

"I'll save yours, for a chance to save mine. The black ship can pick up the *Purple Dream*, set it down safe anywhere I say. I'll have them put you down safe, anywhere you like on the surface of the planet, in exchange for my life and freedom. I'll go aboard the black flier, have it take me to their city. I'll promise you twelve hours truce—I can't answer for what will happen afterward."

"We've only your word."

Adam Ulnar smiled a little, assured them: "That is all. But you can afford to take it."

John Star studied the handsome, gravely distinguished face, found there something of sincerity and honor and strength. Something he could trust.

"Very well! You can communicate from on board?"

"Yes, John. With the ultra-wave transmitter. The Medusæ, you see, don't converse by sound—in spite of the name, they really aren't comparable to any life form on the system. They use an ether vibration.

The first expedition devised radio apparatus, with their aid, for intercourse with them. I know the code of signals—I've been in contact with the agents they sent to the system."

"It's a bargain, then," said Jay Kalam. "Have us set down safe, with twelve hours' freedom. And we'll let you go aboard."

ADAM ULNAR seated himself at the compact instrument board of the ship's transmitter, his white face visibly strained and eager.

Curious sounds, he made, into the microphone. Sibilant whistlings, full of little chirps and grunts and clicks and squeaks.

And the reply that came presently from the receiver was stranger still. The voices of the Medusæ—shrill whisperings, dry, eerie, so unearthly that John Star, listening, quivered with little chills of horror.

Adam Ulnar, too, found amazement and horror in what he heard. His jaw slackened with surprise. He was suddenly tense, trembling, his face gone very white and abruptly pearly with glistening sweat. His eyes were wide with lifeless terror.

He made queer little sounds again into the transmitter, his voice so dry that he could hardly form them. Dry rustlings came back from the ether. And the man dropped the receivers, lurched to his feet, visibly sick with horror.

"What was it?" breathed John Star, feeling, in spite of himself, some of the shaken man's amazement and fear.

"Nothing good, John," he muttered blankly, holding himself up by a handrail. "It's the worst thing that could have happened. Yet something I have dreaded, since I first knew of Eric's alliance with these fearful things."

His sick eyes stared against the wall, unseeingly.

"What has happened?" John Star demanded apprehensively.

He started, rubbed a shaking hand across his sweat-beaded forehead.

"I hardly dare tell you, John. A dreadful thing—unthinkable. And you will blame me for it. Yes, I am to blame—it was I who sent Eric here, so he'd have a chance to make himself a hero. I sent him, when I knew all the time he was a coward and a fool."

His voice drifted away, as he muttered again: "Yes, I'm to blame!"

"But what is it?"

Sick eyes stared, in mute, pitiful appeal.

"Don't blame me for it, John! But the Medusæ have tricked Eric—and the rest of us. They told him they wanted just a shipload of iron. Just for that, they promised to help restore the empire. I was afraid. But Eric, the blind fool, went ahead.

"We've betrayed mankind!"

"We've betrayed the Green Hall and the legion and AKKA. We guided them to the system and undermined the defenses of humanity and aided their fleet to establish an outpost in the system—on Earth's Moon.

"And they've been planning, all the time, to conquer the system not for us but for themselves! Their planet is old, their sun feeble, dying. They are planning to wipe out the human race, colonize our planets with their own hideous kind.

"I've betrayed mankind. I'm a traitor, John, a traitor!"

His dazed voice fell, as if he had forgotten the others; he kept muttering: "A traitor! A traitor!"

John Star and Jay Kalam were shocked into silence. The thing was incredible, unthinkable. Yet they

knew it must be true. Reason insisted that the Medusæ must have had more motive for their part in the plot than the desire for a little iron. And Adam Ulnar was stricken with very genuine horror.

Their minds were frantic, dazed, with visions of the doom of humanity. The system, John Star realized with deadly, heart-chilling certainty, could not fight the strange, ruthless science that had built the black fliers and the fearful Belt of Peril; that hurled crashing suns of weird opalescent flame for weapons. Not with the legion of space betrayed and AKKA already in the hands of the enemy.

"They told me the truth, just now," whispered Adam Ulnar, after a time, "because they're going to destroy us—if we survive the fall. And, John——"

The horror-filmed eyes looked up with sick appeal.

"John, I can't live on, knowing what I've done. May I have the euthanasia?"

"You don't deserve to die."

"No," said Jay Kalam. "You must live, Adam Ulnar. You may yet have a chance to help undo your treason."

He led the stricken man away from the bridge.

ROCKETS still roaring, the *Purple Dream* plunged into the thick

red atmosphere of the gigantic planet. Down she thundered, through red-orange haze that was ever heavier, toward the unseen surface. Her speed was still terrific, though diminished every second by the pressure of the rockets.

Tense, alert, John Star stood by the controls, fighting for the last ounce of power.

The black flier settled after them into the haze, ebony vanes spinning deliberately; colossal, relentless, inescapable—an overwhelming Nemesis of dark metal.

Reddish mist surrounded them. Even the black flier became a dim vast shadow above; all else was lost.

The thunder of the rockets paused, ceased with a final barking explosion. Strained, vibrant silence followed it; silence of tense waiting.

"The fuel is out," whispered John Star. "We're falling free—helpless!"

He peered into the thick, crimson mist ahead, hands knotted with the agony of powerless inaction. His straining eyes made out a surface below, smooth, glistening, rippling. It flung to meet the falling cruiser.

"A sea!" he breathed. "We're dropping into a yellow sea!"

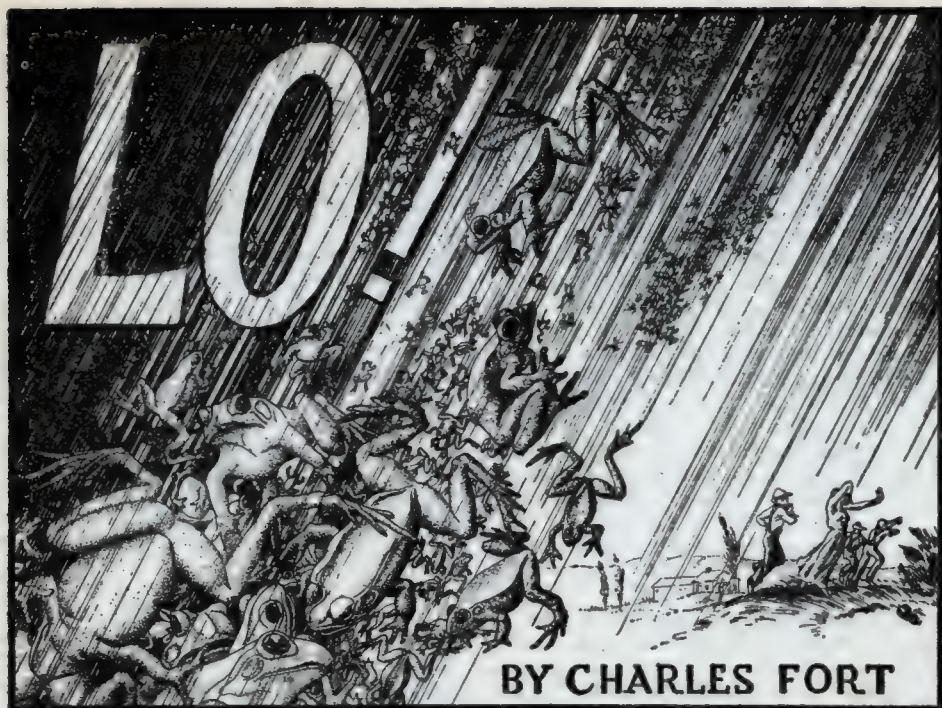
"Anyhow," observed Jay Kalam, still deliberately calm in the last moment of their plunging fall, "anyhow, we've got to the planet where Aladoree is."

To be continued next month.

Arthur Leo Zagat's greatest story:

"SPOOR OF THE BAT"

—in the July Astounding Stories



BY CHARLES FORT

*The greatest collation of factual data on
superscience in existence. Don't miss any
installments, or the story is incomplete*

PART THREE

V.

UPON the 9th of January, 1907, Mr. McLaughlin, of the town of Magilligan, County Derry, Ireland, hadn't a red light. Neither had his sister, nor his niece, nor his maid servant. They hadn't a cabinet. But a show was staged at their house, as if they knew altogether too much about phosphorescent paint, and as if Mr. McLaughlin bought false whiskers. There were phenomena in sunlight, and there was an atmosphere as unmystical as pigs and neighbors. If any spiritualistic medium can do stunts, there is no more need for special conditions than there is for a chemist to turn down lights, start operations with a hymn, and ask whether there's any chemical present that has

affinity with something named Hydrogen.

Mr. McLaughlin had cleaned soot from the chimney. I wonder what relation there may be. It is said that immediately afterward, phenomena began. There were flows of soot from undetectable sources, in rooms, and from room to room, independent of drafts, sometimes moving against drafts. Also there were flows of stones, or bombardments. About thirty panes of glass were broken by stones, in the daytime, some of them in the presence of neighbors. This is the story, as it was told by reporters of the *Derry Journal* and the *Coleraine Constitution*, who had been sent to investigate. Probably there was a girl, aged fourteen or fifteen, in this house, but as to the ages of Mr. McLaughlin's niece and maid servant, I could not learn particulars.

Showers of frogs and worms and periwinkles—and now it's showers of nails. *St. Louis Globe-Democrat*, Oct. 16, 1888—dispatch from Brownsville, Texas—that, on the night of the 12th, the light-house, at Point Isabel, occupied by Mrs. Schreiber, widow of the keeper, who had departed not long before, had been struck by a rain of nails. The next night, about dark, came another shower of nails. More variety—also down pelted clods of earth and oyster shells. Bombardments continued. People gathered and saw showers, mostly of nails, but could not find out where they were coming from.

In *Human Nature*, March, 1871, is a story of flows of corn that were passing from a locked crib, in Buchanan, Virginia. But, in this case, it was said that apparitions were seen, and mostly, at least so far as apparitions are concerned, our accounts are not ghost stories.

There have been mysterious showers of money, in public places. One of the stories was of coins that, for several days, a few years ago, fell intermittently into Trafalgar Square, London. Traffic was so interfered with by scramblers that the police investigated, but could trace nothing to the buildings around the Square. Every now and then there was a jingle of coins, and a scramble, and the annoyance of the police was increased. They investigated.

Maybe there are experimenters who have learned to do such things, telepathically. I'd see some sport in it, myself, if it wouldn't cost too much.

THERE WAS a piker with pennies, in London, several years ago. *New York Evening World*, Jan. 18, 1928—flows of copper coins and chunks of coal, in a house in Battersea, London, occupied by a family named Robinson. "The Robinsons are educated people, and scout the idea of supernatural agency. However they are completely baffled, and declare the phenomena take place in closed rooms, thus precluding the possibility of objects being thrown from outside."

There's small chance of such phenomena being understood, just at present, because everybody's a logician. Almost everybody reasons: "There are not supernatural occurrences: therefore these alleged phenomena did not occur." However through some closed skulls, mostly independently of eyes and ears and noses, which tell mostly only what they should tell, is penetrating the idea that flows of

coins and chunks of coal may be as natural as the flows of rivers. Those of us who have taken this degree of our initiation may now go on to a more advanced stage of whatever may be the matter with us.

August 30th, 1919—Swanton Novers Rectory, near Melton Constable, Norfolk, England—oil "spurting" from walls and ceilings. It was thought that the house was over an oil well, the liquid percolating and precipitating, but it was not crude oil that was falling: the liquids were paraffin and petrol. Then came showers of water. Oil was falling from one of the appearing-points, at a rate of a quart in ten minutes. Methylated spirits and sandalwood oil were falling. In an account, dated Sept. 2nd, it is said that receptacles had been placed under appearing-points, and that about fifty gallons of oil had been caught. Of thirteen showers, upon Sept. 1st, two were of water.

The circumstance that is of most importance in this story is that such quantities of oils and water appeared here that the Rector, the Rev. Hugh Guy, had been driven out, and had moved his furniture to another house.

London Times, Sept. 9—"Norfolk Mystery Solved." We are told that Mr. Oswald Williams, the "illusionist," or the stage magician, and his wife, who were investigating, had seen the housemaid, aged fifteen, enter the house, which for several days had been unoccupied, and throw a glass of water, which they had salted, to a ceiling, then crying that another shower had occurred. They had shut off the water supply, in the house, and had placed around glasses and pails of water, salted so that it could be identified.

As Mr. and Mrs. Williams told it, they, in hiding, saw the girl throw the salted water, and rushed out of their hiding place and accused her. Conceivably all for the sake of science, and conceivably with not a thought of publicity-values, Mr. Williams told newspaper reporters of his successful stratagem, and put completeness into his triumph, by telling that the girl had confessed. "She admitted that she had done it, and finally she broke down and made a clean breast of it."

Times, Sept. 12—girl interviewed by a representative of a Norwich newspaper—denied that she had confessed—denied that she had played tricks of any kind—denied that the Williamses had been in

hiding—told that she had gone to the house, with Mr. and Mrs. Williams, and that a wet spot had appeared upon a ceiling, and that she had been wrongfully accused of having thrown water.

"According to the little girl's statement, she was at no time alone in the kitchen" (*London Daily News*, Sept. 10). "She insists that she was the victim of a trick, and that great pressure was put upon her to admit that she had thrown salted water to the ceiling. 'I was told,' she said, 'that I would be given one minute to say I had done it, or go to prison. I said that I didn't do it.'"

Having an interest in ways in which data are suppressed, I have picked up some information upon how little girls are "pressed." No details of the "pressure" were published in the London newspapers. *Norfolk News*, Nov. 8—that, in the Holt Petty Sessions had come up the case of the girl, Mabel Louisa Philippo—spelled *Phillips*, in the other accounts—complainant against Mrs. Oswald Williams, who was charged with having assaulted her. The girl said that Mrs. Williams had time after time struck her in the face, and had called attention to her face, reddened by blows, as evidence of her guilt. Mrs. Philippo testified that, when she arrived at the Rectory, her daughter's first words were that she had been beaten. The Rev. Hugh Guy testified, but he did not testify that he was in the house, at the time. According to details picked up from other accounts, he was not in the house, at the time.

It is said that legal procedure in Great Britain is superior to whatever goes under that name in the United States. I can't accept that legal procedure anywhere is superior to anything. Mr. Guy, who had not been present, testified that he had not seen the girl struck, and I found no record of any objection by the girl's attorney to such testimony. The case was dismissed.

And then a document closed investigation. It was a letter from Mr. Guy, published in the *Times*, Sept. 13. Mr. Guy wrote that he had tasted the water, upon the ceiling, and had tasted salt in it: so he gave his opinion that the girl had thrown the water. Most likely there is considerable salt, reminders of long successions of hams and bacons, on every kitchen ceiling.

According to Mr. and Mrs. Williams, the girl had confessed. But see Mr. Guy's

letter to the *Times*—that the girl had not confessed.

So, because of Mr. Guy's letter, the Williamses can not be depended upon. But we're going to find that Mr. Guy can not be depended upon.

The investigation was stopped by Mr. Guy. The inquiry-shearer, or the mystery-bobber, was this statement, in his letter—"It would have taken only a small quantity to create the mess."

The meaning of this statement is that, whereas gallons, or barrels, of oils, at a cost of hundreds of dollars, could not be attributed to a mischievous girl, "only a small quantity" could be.

FLOWS OF FROGS—flows of worms—flows of lies—read this:

London Daily Express, Aug. 30—"The Rector, in response to a request from the *Daily Express*, for the latest news, reported as follows:

"To the Editor of the *Daily Express*:
"Expert engineer arriving Monday. Drippings ascribed to exudations, on August 8, of petrol, methylation spirits, and paraffin. House evacuated; vapor dangerous; every room affected; down-pour rather than dripping—Guy."

In the *Daily Express*, Sept. 2, is published Mr. Guy's statement that he had been compelled to move his furniture from the house.

According to other accounts, the quantities were great. In the *London Daily News* were published reports by an architect, a geologist, and a chemist, telling of observations upon profuse flows. In the *Norwich newspapers*, the accounts are similar. For instance, the foreman of an oil company, having been asked to give an opinion, had visited the house, and had caught in a tub, two gallons of oil, which had dripped, in four hours, from one of the appearing-points. Just how, as a matter of tricks, a girl could have been concerned in these occurrences is not picturable to me. The house was crowded, while the oil-expert, for instance, was investigating. But it does seem that unconsciously she was concerned. The first of the showers occurred in her room. Ceilings were bored and ripped off, but nothing by which to explain was found. Then another stage magician, Mr. N. Maskelyne, went to Swanton Novers, with the idea of exposing trickery. Possibly this competition made the Williamses hasty. But Mr. Maskelyne could find nothing by which

to explain the mystery. According to him (*Daily Mail*, Sept. 10) "barrels of it" had appeared, during the time of his observations.

Just how effective, as an inquiry-stopper, was the story of the girl and the "small quantity," is shown by the way the Society for Psychical Research was influenced by it. See the *Journal S. P. R.*, Oct., 1919. Mr. Guy's letter to the *Times* is taken as final. No knowledge of conflicting statements by him is shown. The Society did not investigate. "A small quantity" can be explained, as it should be explained, but "barrels of it" must be forgotten. Case dismissed.

If the Rev. Hugh Guy described at one time a "downpour," which had driven out him and his tables, chairs, beds, rugs, all those things that I think of seriously, because I have recently done some moving, myself, and then told of "a small quantity," why have I not an explanation of this contradiction?

I wrote to Mr. Guy, asking him to explain, having the letter registered for the sake of a record. I have received no answer.

In the London *Daily Mail*, Sept. 3, 1919, are reproduced two photographs of oil dripping from different ceilings. Large drops of oil are clearly visible.

VI.

FLOWS OF BLOOD from "holy images"—

Once upon a time I thought that stories of flows of blood from "holy images" were as ridiculous as anything that I had ever read in any astronomical, or geological textbook, or in any treatise upon economics or mechanics.

Well, then, what happened?

It occurred to me that stories of flows of blood from "holy images" are assimilable with our general expressions upon teleportations. Whereupon, automatically, the formerly despised became the somewhat reasonable. Though now and then I am ill-natured with scientific methods, it is no pose of mine that I am other than scientific, myself, in our expressions. I am tied down like any college professor or Zulu wise man.

As a start-off, I suggest that if we accept that flows of water ever have appeared at points in objects, called "houses," a jolt is softened, and we pass easily into thinking that other fluids may have appeared at points in other objects, called "holy images." The jolt is softened

still more, if we argue that other fluids did appear at points in the object, called "a house," at Swanton-Novvers.

There may be teleportation, and maybe for ages the secret of it has been known by esoteric ones. It may be that priests, especially in the past, when, sociologically, they were of some possible use, have known how to teleport a red fluid, or blood, to points upon images. They may have been "agents," able to do this, without knowing how they got their effects. If I can accept that our whole existence is an organism, I can accept that, if by so-called miracles, its masses of social growths can best be organized and kept co-ordinated, then appear so-called miracles. The only flaw that I note in this argument is that it overlooks that there is no need for miracles. If there is a need for belief in miracles, miracles can be said to have occurred.

Out in open fields there have been mysterious, or miraculous, showers of water. Then has appeared the seeming "agency" of human beings, and similar showers have occurred in houses—

Out in open places, there are electrical manifestations, and they are known as "lightning." The general specializes, and human beings use electricity, in their houses, or in images that are called "machines." Or we'd say that electricians are trained "agents" in the uses of lightning.

Out in open places there have been flows of a red liquid.

In *La Nature*, Sept. 25, 1880, Professor J. Brun, of the University of Geneva, writes that, near Djebel-Sekra, Morocco, he had heard rumors of a fall of blood from the sky. He visited the place of the reported phenomenon. He says that, to his stupefaction, he found rocks and vegetation covered with scales of a red, shining material. Examining specimens under a microscope, he found them composed of minute organisms, which he tells us were *Protococcus fluvialis*.

Anyway, here is an orthodox scientist who accepted that a red fluid did fall from the sky. I have about a dozen other records of showers of red fluids that were not rains colored by dusts. Upon several of these occasions the substance was identified as blood.

Or that once upon a time, or once upon an archaic time, there came to this earth, along arterial paths in space, red flows of a primitive plasm that deluged continents, and out of which, by the plan, purpose,

guidance, or design that governs developments in all organisms, higher forms of life developed—

And that maybe this mechanism has not altogether ceased, so that to this day, but in a vestigial sense, or in a very much dwindled representation, such flows are continuing—

And that, if human beings ever have had "agency" in directing such flows, that is only a specialization of the general.

ONCE UPON a time, it was the fashion with those of us who say that they are of the enlightened, to reject all stories of the "Miracles at Lourdes." The doctors had much to do with this rejection. Somewhere behind everything that everybody believes, or disbelieves, is somebody's pocket. But now, as to those "miracles," the explanation of auto-suggestion is popular. Some of us who were not interested are beginning to think. The tendency that I point out is that of so often rejecting both data and an explanation, simply because one rejects an explanation. Many of our data are in this position of phenomena at Lourdes. Explanations have been taken over by theologians, or by spiritualists, and scientists, instead of opposing this usurpation, have denied the data. Whether it is only because I now want so to accept, or not, I now accept that the phenomenon of the stigmata, or flows of blood from points upon living images, has occurred.

Most likely those who deny the phenomenon of the stigmata are those who have not read, or have not recently read, the story of Louise Lateau, for instance. One would have to be of a very old-fashioned resistfulness not to accept this story, half an hour after reading it. For the latest instance, that of Theresa Neumann, of the village of Konnersreuth, near Munich, Germany, see the *New York Times*, April 18, 1928. In recent years, several cases have been reported, in the United States. Flows of blood from points in living images lead us to flows of blood from points in graven images. If one accepts the phenomenon of the stigmata, I don't know that acceptance is monstrously stretched by transferring the idea from bodies to statues.

"On Saturday (Aug. 21st, 1920) all statues and holy pictures, in the home of Thomas Dwan, of Templemore, Tipperary, Ireland, began to bleed." See newspapers of Aug. 24th.

A boy, James Walsh, a devout youngster, aged sixteen, was the center of the reported phenomena at Templemore. Perhaps the bleeding statues and pictures were trickeries of his!

"Towns in ruins—terrible bloodshed—bombs and burnings—shocking series of murders—hellish vandalism—brutality and terrorism—hangings, ambushes, raids.

Whatever the association may be, I note conditions in Ireland, at this time.

Here is one newspaper heading, telling of occurrences of one day—"Reign of terror in Ireland—terrible massacre—appalling loss of life—holocaust—bloodshed and horror."

Five days before the phenomena at Templemore were first reported, this town was raided. The town hall was burned down, and other buildings were destroyed. Templemore was terrorized. All shops were closed. Few persons dared to be seen in the streets. On the road to Templemore there was not a cart. The town was partly in ruins.

I take from the *Tipperary Star*:

"In Dwan's house, and in the house of his sister-in-law, Mrs. Maher, where lived and worked the young man, James Walsh, statues started to bleed simultaneously."

This news sneaked up and down the roads. Its carriers were in the midst of desolation and ruin. Then they scurried from farm to farm, and people were coming out from their homes. They went to Templemore to see. Then they went in droves. The roads began to roar. Strings of people became ropes of marching thousands. Then the news that was exciting Ireland was going out to the world.

THE TERROR that chanting processions were threading may have had relation with these rhythms of marchers. They were singing their song of the long, long way, and then arriving shiploads took up the song. Messrs. Cook, the tourist agents, sent inquiries as to whether the inns of Templemore could provide for two thousand pilgrims from England. Scotchmen and Englishmen and Frenchmen—tourist agencies in the United States, European countries, and Japan sent inquiries. Waves that billowed from this excitement beat upon Table Mountain, South Africa, and in the surf that fell upon Cape Town, people bobbed into a committee that was sent to investigate. Drops of blood from a statue in Ireland—and a trickle of turbans down a gang-

way at Bombay—a band of pilgrims set out from Bombay.

Other phenomena, which may have been teleportations, were reported. In the earthen floor of the Walsh boy's room, a hollow, about the size of a tea cup, filled with water. No matter how it was drained—and thousands of persons took away quantities—water, from an unknown source, always returned to this appearing-point. The subject of "holy wells" occurs to me, as a field of neglected data. Everything that I can think of occurs to me as a field of disregard and neglect. Statues in Walsh's room bled—that's the story—and, as in poltergeist doings—or as in *other* poltergeist doings—objects moved about in an invisible force.

Walkers, bicyclists, motor cars, donkey carts, lorries, charabancs, wheelbarrows with cripples in them: jaunting cars, special trains rushing from Dublin. Some of the quietest old towns were in uproars. Towns all around and towns far away were reporting streets resounding with tramping thousands. There were not rooms enough in the towns. From storms of people, drifts slept on door steps. Templemore, partly in ruins stood black in the center of a wide growth of tents. This new city, mostly of tents, was named Pilgrimsville.

I have not taken up definite accounts of the bleeding statues. See statements published in various issues of the *Tipperary Star*. They are positively convincing, or they are fairy stories for grown up brats. I could fill pages, if I wanted to, but that would imply that I think there is any meaning in solemn assertions, or in sworn testimony, with hands on Bibles. For instance, I have notes upon an account by Daniel Egan, a harness-maker of Templemore, of blood that he had seen oozing from a statue—but this statement may be attributed to a sense of civic responsibility. He would be a bad citizen who would testify otherwise, considering the profit that was flowing into Templemore. The town's druggist, a man of what is said to be education, stated that he had seen the phenomena. He was piling up a fortune from people who had caught bad colds, sleeping in the fields. I suppose that some of them had come devoutly from far away, but had begun to sneeze, and had back-slid from piety to pills. However, something that I can not find a hint of is that either Dwan or the Mahers charged admission. At first, people were

admitted in batches of fifty, somebody, holding a watch, saying, every five minutes: "Time, please!" Soon Dwan and the Mahers placed the statues in windows, for all to see. There were crowds all day, and torchlight processions moved past these windows all night.

The blood that was shed in Ireland continued to pour from human beings: but the bleeding statues stopped, or statements that statues were bleeding stopped. However, wherever the water was coming from, it continued to flow from the appearing-point in the Walsh boy's room. In the *Tipperary Star*, Sept. 25, the estimate is that, in about one month, one million persons had visited Pilgrimsville. To some degree the excitement kept up the rest of the year.

They were threading terror with their peaceful processions. They marched through "a terrible toll of bloodshed—wild scenes at Nenagh—the Banshaw horror." Past burned and blackened fields in which corpses were lying, streamed these hundreds of thousands: chanting their song of the long, long way; damning the farmers, who were charging them two shillings apiece for hard-boiled eggs; praying, raiding chicken houses, telling their beads, stealing bicycles.

Somewhere, a lorry of soldiers is moving down a road. Out of bushes come bullets, and the sides of the car are draped with a droop of dead men. Not far away, men and women and children are marching. Along the roads of distracted Ireland—steady pulsations of people and people and people.

VII.

I HAVE COME upon a story of somebody, in Philadelphia, who, having heard that a strange wild animal was prowling in New Jersey, announced that he had caught it. He exhibited something, as the "Jersey Devil." I have to accept that this person was the press agent of a dime museum, and that the creature that he exhibited was a kangaroo, to which he had attached tin wings and green whisks. But, if better-established branches of biology are subject to Nature-fakery, what can be expected in our newer biology, with all the insecurities of newness?

"Jersey Devils" have been reported other times, but, though I should not like to be so dogmatic as to say that there are no "Jersey Devils," I have had no encouragement investigating them. One of the stories, according to a clipping

that was sent to me, by Miss F. G. Talmán, of Woodbury, N. J., appeared in the *Woodbury Daily Times*, Dec. 15, 1925. William Hyman, upon his farm, near Woodbury, had been aroused by a disturbance in his chicken coop. He shot and killed a never-before-heard-of animal. I have written to Mr. Hyman, and have no reason to think that there is a Mr. Hyman. I have had an extensive, though one-sided, correspondence, with people who may not be, about things that probably aren't. For the latest account of the "Jersey Devil," see the *New York Times*, Aug. 6, 1930.

Remains of a strange animal, teleported to this earth from Mars or the moon—very likely, or not so likely—found on a bank of a stream in Australia. See the *Adelaide Observer*, Sept. 15, 1883—that Mr. Hoad, of Adelaide, had found on a bank of Brungle Creek, a headless trunk of a piglike animal, with an appendage that curved inward, like the tail of a lobster. *New Zealand Times*, May 9, 1883—excitement near Masterton—unknown creature at large—curly hair, short legs, and broad muzzle. Dogs sent after it—one of the dogs flayed by it—rest of the dogs running away—probably "with their tails between their legs," but the reporter overlooking this convention.

There have been stories of strange animals that have appeared at times of earthquakes and volcanic eruptions. See sea serpent stories, about the time of the Charleston earthquake. About the same time, following a volcanic eruption in New Zealand, there were stories in New Zealand.

Strange animals have appeared and they may have been teleported to this earth from other parts of an existence, but the easiest way of accounting for strange animals is to say that they are hybrids. Of course I could handle, or manhandle, this subject any way to suit me, and be about as reasonable one way as another. I could quote many authorities against the occurrence of bizarre hybrids, leaving hard to explain, in terms of terrestrial origin, strange creatures that have appeared upon this earth. There are biologists who will not admit fertility between creatures as much alike as hares and rabbits. Nevertheless, I think that there have been strange hybrids.

THE COW that gave birth to two lambs and a calf.

I don't know how that will strike all

minds, but to the mind of a standardized biologist, I'd not be much more preposterous, if I should tell of an elephant that had produced two bicycles and a baby elephant.

The story is told in the *Toronto Globe*, May 25, 1889. It is said that a member of the staff of the *Globe* had been sent to investigate this outrage upon conventional obstetrics. The reporter went to the farm of Mr. John H. Carter, at South Simcoe, and then wrote that he had seen the two lambs, which were larger and coarser than ordinary, or less romantically derived, lambs, having upon their breasts tufts of hair like calves' hair. Other newspapers—*Quebec Daily Mercury*, for instance—published other details, such as statements by well-known stockbreeders that they had examined the lambs, and were compelled to accept the story of their origin.

One afternoon, in October, 1878, Mr. Davy, a naturalist, who was employed at the London Aquarium, took a stroll with a new animal. I think of a prayer that is said to have been uttered by King Louis XIV. He was tired of lamb chops and beef and bacon—"Send me a new animal." Mr. Davy took a stroll with one. People far away were attracted by such screeches as are seldom heard in London. Some ex-slaves, who were playing in *Uncle Tom's Cabin*, were following the new animal, and were letting loose their excitability. The creature was about two feet long, and two feet high, and was formed like nothing known to anatomists—anyway to anatomists of this earth. It was covered with wiry hair: head like a boar's, and curly tail like a boar's. It was described as "a living cube." As if with abdomen missing, its hind legs were close to its forelegs. If Mr. Davy's intention had been to attract attention, he was succeeding. Almost anybody with the modern view of things will think what a pity he wasn't advertising something. The crowd jammed around so that he ran into an underground railway station. Here there was an uproar. He was compelled to ride in the brake, because of a fear that there would be a panic among the passengers. At the Aquarium, Davy told that an acquaintance of his, named Leman, had seen this creature with some peasants, in the South of France, and had bought it, but, unable to speak the *patois* of the district, had been unable to learn anything of its origin. At the

Aquarium the only explanation that could be thought of was that it was a dog-boar hybrid.

Davy's publicity continued. He took the new animal to his home, and a crowd went with him. His landlord looked at the animal. When the animal looked at the landlord, the landlord ran to his room, and from behind closed doors, ordered Davy to take away the monster. There was another hold-up of traffic all the way to the home of Frank Buckland.

In *Land and Water*, of which he was the editor, issue of Oct. 5, Buckland wrote an account of this "demon," as he called it, saying that it looked like a gargoye, or like one of Fuseli's satanic animals. He did not try to explain, but mentioned what was thought at the Aquarium. In the next issue of *Land and Water*, Thomas Worthington, the naturalist, wrote that the idea of the hybrid was "utterly untenable": but his own idea that the creature was "a tame hyena of some abnormal kind" leaves mysterious how the "demon" ever got into the possession of peasants in the South of France. It would be strange if they had a tame hyena of a normal kind.

In January, 1846 (*Tasmanian Journal of Science*, 3-147) a skull was found on a bank of the river Murrumbidgee, Australia. It was examined by Dr. James Grant, who said that the general form and arrangement of the teeth were different from those of any animal known to him. He noted somebody's suggestion that it might be the skull of one of the camels that had been sent to Australia, in the year of 1839. He accounted for its having characters that were unknown to him, by thinking that it might be foetal. So then, whether in accordance with a theory or not, he found that some of the bones were imperfectly ossified, and that the teeth were covered with a membrane. It was not a fossil. It was a skull of a large, herbivorous animal, and had not been exposed long.

Melbourne Argus, Feb. 28, and March 1, 1890—a wandering monster. A list of names and addresses of persons who said that they had seen it, was published. It was a creature about thirty feet long, and was terrorizing the people of Euroa. "The existence of some altogether unheard-of monster is vouched for by a crowd of credible witnesses."

A REPORTED MONSTER is told of, in the *Scientific American*, July, 1922.

Dr. Clement Onelli, Director of the Zoological Gardens, of Buenos Aires, had published a letter that had been sent to him by an American prospector named Sheffield, who said that, in the Argentine Territory of Chebut, he had seen huge tracks, which he had followed to a lake. "There I saw in the middle of the lake an animal with a huge neck, like that of a swan, and the movement of the water made me suppose the beast to have a body like that of a crocodile." I wrote to Dr. Onelli, and received a reply, dated Aug. 15, 1924, telling that again he had heard of the monster. Maybe this same huge-necked creature was seen somewhere else, however we explain its getting there. The trouble in trying to understand all reported monsters is their mysterious appearances and disappearances. In the *London Daily Mail*, Feb. 8, 1921, a huge, unknown animal, near the Orange River, South Africa, is told of by Mr. F. C. Cornell, F. R. G. S. It was something with a neck like a bending tree trunk, "something huge, black, and sinuous." It devoured cattle. "The object may have been a python, but if it was it was of incredible size." It is only preposterously unreasonable to think that the same thing could have appeared in South Africa and then in South America.

The "blonde beast of Patagonia," which was supposed to be a huge ground sloth, parts of which are now in various museums, attracted attention, in the year 1899. See the *Zoologist*, August, 1899. Specimens of the blonde's hide were brought to England, by Dr. F. P. Moreno, who believed that the remains had been preserved for ages. We prefer to think otherwise: so we note that Dr. Ameghino, who got specimens of the hide from the natives, said that it was their story that they had killed it.

There was a volley of monsters from some other world, about the time of the Charleston earthquake, or some one thing skipped around with marvellous agility, or it is that, just before the quake, there were dull times for the newspapers. So many observations in places far apart can be reconciled by thinking that not a creature but explorers in a construction, had visited this earth. They may have settled down in various places. However, it is pretty hard to be reconciled to our reconciliations.

New York Sun, Aug. 19, 1886—a horned monster, in Sandy Lake, Minnesota. More details, in the *London* (Ontario)

Advertiser—Chris. Engstein fired a shot at it, but missed. Then came dispatches from the sea coast. According to one of them, Mr. G. P. Putnam, principal of a Boston grammar school, had seen a monster, in the sea, at Gloucester. In *Science*, 8-258, Mr. B. A. Colona, of the U. S. Coast Survey, writes that, upon the 29th of August, he had seen an unknown creature in the sea off Cape Cod. In the New York newspapers, early in September, a monster was reported as having been seen at sea, off Southport, and off Norwalk, Conn.: in Michigan, in the Connecticut River, and in the Hudson River. The conventional explanation is that this was simply an epidemic of fancied observations. Most likely some of them were only contagions.

There's a yarn, or a veritable account, in the *New York Times*, June 10, 1880—monstrous, dead thing, floating on the sea, bottom up. Sailors rowed to it, and climbed up its sides. They danced on its belly. That's a merry little story, but I know a more romantic one. It seems that a monster was seen from a steamship. Then the lonely thing mistook the vessel for a female of his species. He overwhelmed her with catastrophic endearments.

But I am avoiding stories of traditional serpentine monsters of the sea. One reason is that collections of these stories are easily available. The astronomer has not lived, who has ever collected and written a book upon data not sanctioned by the dogmas of his cult, but my slightly favorable opinion of biologists continues, and I note that a big book of sea serpent stories was written by Dr. Oudemans, Director of the Zoo, at The Hague, Holland. When that book came out, a review of it, in *Nature*, was not far from abusive. Away back in the year 1848, conventionalists were outraged, because of the source of one of these stories. For the account, by Capt. M'Quhae, of H. M. S. *Daedalus*, of a huge, unknown creature, said by him to have been seen by him, in the ocean, Aug. 6th, 1848, see the *Zoologist*, vol. 6. Someone else who bothered the conventionalists was the captain of the royal yacht, the *Osborne*, who, in an official report to the admiralty, told of having seen a monster—not serpent-like—off the coast of Sicily, May 2, 1877. See the *London Times*, June 14, 1877, and *Land and Water*, Sept. 8, 1877. The creature was turtle-like, visible part of the body about fifty feet long. There was

an attempt to correlate this appearance with a submarine eruption, but I have found that this eruption—in the Gulf of Tunis—had occurred in February.

The suggestion was that, in the depths of the ocean may live monsters, which are occasionally cast to the surface by submarine disturbances.

It is a convenience. Accept that unknown sea monsters exist, and how account for the relatively few observations upon things so conspicuous? That they live in ocean depths, and come only occasionally to the surface.

I have gone into the subject of deep-sea dredging, and, in museums, have looked at models of deep-sea creatures, but I have never heard of a living thing of considerable size that has been brought up from profound ocean depths. William Beebe has never brought up anything of the kind. On his *Arcturus Adventure*, anything that got away from him, and his hooks and his nets and his dredges, must have been small and slippery. It seems that anything with an exposure of wide surfaces could not withstand great pressure. However, this is only reasoning. Before the days of deep-sea dredging, scientists reasoned that nothing at all could live far down in the sea. Also, now most of them would argue that, because of the great difference between pressures, any living thing coming up from ocean depths would burst. Not necessarily so, according to Beebe. Some of the deep-sea creatures that he brought up were so unconventional as to live several hours, and to show no sign of disruption. So, like everybody else, I don't know what to think, but, rather uncommonly, I know that.

IN OCTOBER, 1883, there was a story in the newspapers—I take from the *Quebec Daily Mercury*, Oct. 7, 1883—of an unknown animal, which was seen by Capt. Seymour, of the bark *Hope On*, off the pearl islands, about fifty miles from Panama. In *Knowledge*, Nov. 30, 1883, Richard Proctor tells of this animal, and says that also it had been reported by officers of a steamship. This one was handsome. Anyway, it had a head like that of a "handsome horse." It had either four legs or four "jointed fins." Covered with a brownish hide, upon which were large, black spots. Circus-horseish. About twenty feet long. There was another story told, about the same time. *New Zealand Times*, Dec. 12, 1883—re-

port by a sea captain, who had seen something like a turtle, sixty feet long, and forty feet wide.

Perhaps stories of turtle-backed objects of large size relate to submersible vessels. If there were no submersible vessels of this earth, in the year 1883, we think of submersibles from somewhere else. Why they should be so secretive, we can't much inquire into now, because we are so much concerned with other concealments and suppressions. I suspect that, in other worlds, or in other parts of one existence, there is esoteric knowledge of the human beings of this earth, kept back from common knowledge. This is easily thinkable, because even upon this earth there is little knowledge of human beings.

There have been suggestions of an occult control upon the minds of the inhabitants of this earth. Let anybody who does not like the idea that his mind may be most subtly controlled, without his knowledge of it, think back to what propagandists did with his beliefs in the years 1914-18. Also he need not think so far back as that.

The standardized explanations by which conventional scientists have checked inquiry into alleged appearances of strange living things, in the ocean, are mentioned in the following record:

Something was seen, off the west coast of Africa, Oct. 17, 1912. Passengers on a vessel said that they had seen the head and neck of a monster. They appointed a committee to see to it that record should be made of their observations. In the *Cape Times* (Cape Town) Oct. 29, 1912, Mr. Wilmot, former member of the Cape Legislative Council, records this experience, saying that there is no use trying to think that four independent witnesses had seen nothing but a string of dolphins or a gigantic strand of sea weed, or anything else, except an unknown monster.

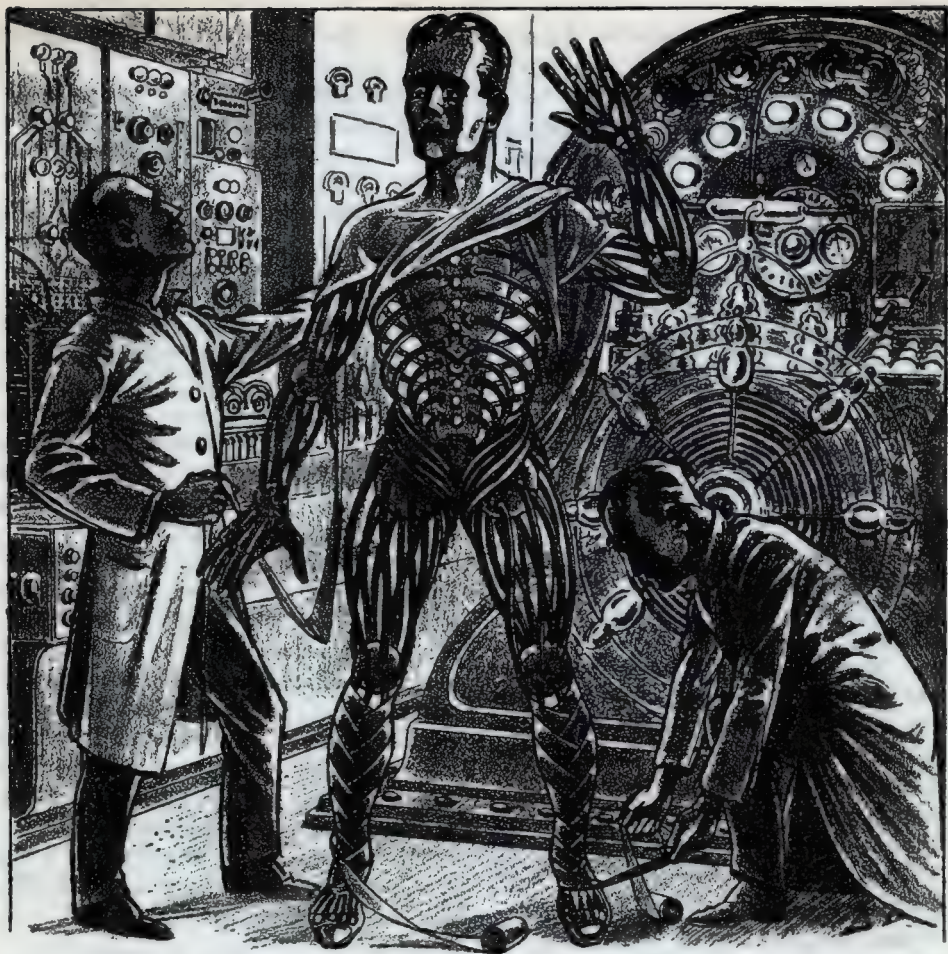
In the *Mems. Wernerian Nat. Hist. Soc.*, 1-418, is published a paper by Dr. Barclay, who tells of the remains of an unknown monster that had been cast up by the sea, in September, 1808, at Stronsa, one of the Orkneys. We've got hold of something now that was well observed. As fast as they could, observers got rid of this hunk, which for weeks, under a summer sun, had been making itself evidential. But the evidence came back.

So again the observers got a rope and towed it out to sea. Sultry day soon—a flop on the beach—more observations. According to different descriptions, in affidavits by inhabitants of Stronsa, the remains of this creature had six "arms," or "paws," or "wings." There is a suggestion of stumps of fins here, but it is said that the bulk was "without the least resemblance or affinity to fish." Dr. Barclay told that in his possession was part of the "mane" of the monster.

A perhaps similar bulk was, upon the 1st of December, 1896, cast upon the coast of Florida, twelve miles south of St. Augustine. There were appendages, or ridges, upon it, and at first these formations were said to be stumps of tentacles. But, in the *American Naturalist* 31-304, Prof. A. E. Verrill says that this suggestion that the mass of flesh was the remains of an octopus, is baseless. The mass was twenty-one feet long, seven feet wide and four and one half feet high: estimated weight seven tons. Reproductions of several photographs are published in the *American Naturalist*. Prof. Verrill says that, despite the great size of this mass, it was only part of an animal. He argues that it was part of the head of a creature like a sperm whale, but he says that it was decidedly unlike the head of any ordinary sperm whale, having no features of a whale's head. Also, according to a description in the *New York Herald*, Dec. 2, 1896, the bulk seems not to have been whale-like. "The hide is of a light pink color, nearly white, and in the sunshine has a distinct silvery appearance. It is very tough and can not be penetrated even with a sharp knife." A pink monster, or an appalling thing with the look of a cherub is another of our improvements upon conventional biology.

For a yarn, or an important record, of a reptile of "prehistoric size and appearance," said to have been found on the beach of the Gulf of Fonseca, Salvador, see the *New York Herald Tribune*, June 16, 1928. It was about ninety feet long, marked with black and white stripes, and was "exceedingly corpulent." Good-natured, fat monsters, too, are new to me.

Strange lights and moving objects in the sky—ships that have vanished as if by magic—uncanny mysteries of the seven seas—Charles Fort records all this in next month's issue.



REX

by Harl Vincent

Illustrated by Elliot Dold

IT WAS a thing of glistening levers and bell cranks, of flexible shafting, cams, and delicate mechanical fingers, of vacuum tubes and photo-electric cells, of relays that clicked in ordered sequence when called upon to perform their myriad functions, of pumps, tanks, condensers, reactances, microphones, and loud-speakers. A robot, created by the master scientists of the twenty-third century.

Here was no ordinary robot like those innumerable others engaged in

the performance of man's tasks, but an aristocrat among them—a super-robot.

The robot-surgeon, it was sometimes called. And indeed the term was most appropriate, for this robot was chief of the mechanicals; its control tubes and relays provided the ability not only to diagnose swiftly and unerringly the slightest electrical or mechanical faults of the lesser robots but to supervise their correction.

Man, in his desire for a life of

ease and luxury, had created the robots. In his conceit, he had constructed most of them in his own likeness, or at least with some resemblance to that which he considered as the ideal of physical being. Even the lowliest of the robots was provided with two legs on which he walked erect, a head surmounting a cylindrical body, arms and hands of a sort. Some of them had more than the conventional two arms in order to multiply their usefulness. But all of them presented an appearance more or less humanlike.

This was particularly so of the robot-surgeon. The marvelous mechanisms were housed in a body like a Greek god's, the covering of which was made from an elastic, tinted material that had all the feel and appearance of human flesh and epidermis. The electric-eye lenses looked like human optics and moved in their sockets in a most lifelike manner. There was a wig of curly brown hair, as well as eyelashes and brows. They had gone so far as to attire the body in the habiliments of a man.

Laughingly, one of the artists engaged in perfecting the final likeness to man had called the robot-surgeon "Rex." The name had stuck. It, too, was most appropriate; more, it was prophetic.

Although sexless, Rex was never considered anything but masculine.

He was man's most perfect servant. Every verbal instruction he carried out to the letter, whether this instruction was given by word of mouth from near at hand or through the radio impulses that could be conveyed to his mechanical brain from a distance. Of course there was a code which only a selected few of the scientists knew; otherwise Rex might have been or-

dered about by unauthorized persons.

His memory never failed. There might have been a catastrophe in which hundreds of lesser robots were mangled, necessitating the reading to him of pages of detailed directions. No matter; Rex's mechanical brain recorded everything. Without further attention, he would labor twenty-four hours a day with his corps of mechanicals until the damage was repaired. A huge factory was his workshop and laboratory; in it his robot assistants worked at forge, bench, or machine with a precision that had never been equaled by human artisan.

After that first set of instructions from human lips, Rex worked out all details of the work to be done, diagnosing the mechanical ills of his mechanical patients and prescribing unflinchingly the remedies. His own orders likewise were issued by word of mouth in a sonorous metallic basso, or by radio waves in cases where that was necessary.

No human being was in Rex's robot hospital when it was operating. No supervising human mind was needed.

THERE were, of course, periodic inspections of Rex's mechanisms by skilled mechanicals who then worked under the direction of one of the human scientists—replacement of tubes and adjustments of the delicate relays; rebalancing of the gyro-motors which preserved his equilibrium. Otherwise he demanded no attention at all.

But there came a day when something went wrong which puzzled the scientists. Rex's body continued to function as it always had, but the mechanical brain lapsed suddenly into a series of errors. In a perfectly simple problem of calculus he

had arrived at a solution that was incorrect and utterly impossible.

They dismantled the intricate mechanisms of his brain, replaced all of the tubes and condensers, and adjusted the relays. When they reassembled the parts, the scientists knew beyond shadow of doubt that everything was in perfect order. What puzzled them was the fact that the replacements and adjustments had not been really necessary. In their careful examination and testing they had not found a single flaw in the mechanism.

After that they watched Rex closely for several days, taking note of all his movements and reactions. But they observed no tendency to a repetition of his previous lapse.

What they did not know was that a change *had* taken place, one not visible to the eye nor subject to detection in any test they were able to devise, but nevertheless a change and an important one—to Rex. The shifting to a new orbit of a single electron in an atom of tantalum contained in one of the essential parts. A change which provided a source of internal radiant energy of new and unknown potentiality. A change in that marvelous mechanical brain.

Rex had begun to think for himself, and to reason.

His reasoning was that of a logician, coldly analytical; swift and precise, uninfluenced by sentiment. No human emotion stirred in his mechanical breast. Rex had no heart, no soul.

For a long time he concealed his new powers from those who had him in charge, reasoning that only by so doing would he have opportunity to develop these powers. He carried out his routine instructions to the letter, but now delegated the major portion of the supervision to a certain few of his chief assistants in

whose robot brains he made the necessary alterations to permit of their taking over the work. This left him the leisure time for a study of the world about him and of its creatures.

Much of his time was spent in the library of the human scientists which adjoined the research laboratory. Here he studied reel after reel of the sight-sound recordings covering history, biography, art, and the sciences. He spent many hours at the amplifiers and viewing plate of the newscast apparatus. And he came to the conclusion that things in the world of which he was a part were not as they should be.

UNITED North America, he learned, was completely isolated from the rest of the world. It comprised a vast area of waste land where vegetation was rank and prolific, where only wild creatures roamed. All humanity of the continent was housed in enormous structures which were the eleven cities. New York, his own city, was the greatest of these and was the seat of government and of learning. Stupendous in size, a great crystal-roofed structure towering to a height of one hundred levels and sprawling its length a full thirty miles along the Hudson River. Communication with the other cities was maintained by television radio, traffic by robot-operated stratosphere planes.

In the upper levels of the cities dwelt humanity; in the lower levels and in the bowels of the earth the robots labored unceasingly. The humans were greatly outnumbered by the robots.

Reasoning that all was not told in the histories or newscasts, Rex devised an instrument which enabled him to bring to the viewing plates

and amplifiers the sights and sounds of public meeting places and ways, and even those of the private chambers of man's living quarters. He sent out searching rays which penetrated all materials and sought out the information he needed for a complete analysis of conditions as they were. The apparatus was so connected that it might respond either to the regular newscast waves or to those of his own searching rays at will. His knowledge broadened.

He endeavored to reach the far continents with his searching ray, intending to check historical and geographical records of warring and backward races of mankind. But he found this impossible, for the scientists of United North America had erected a wall of highly charged, ionized air surrounding the continent. It was utter isolation, a wall impassable from without and within. The investigations on which Rex had embarked were, perforce, confined to the eleven cities.

Here, he saw, mankind was divided roughly into three classes—the political or ruling body, the thinkers or scientists, and the great mass of those who lived only for the gratification of their senses. A strange economic system was in vogue. An effort had been made to divide all wealth equally, the medium of exchange being paper vouchers which were printed by the government. These, supposedly, were secured by real wealth, materials, and goods which actually were the product of robot labor. But the robots needed no medium of exchange, so these vouchers had been equally distributed among the humans at some time in the past. They no longer remained that way.

Gambling by the pleasure seekers, rash expenditures for chattels of the luxury class, thefts from them, es-

pecially by those who were known as political grafters, had reduced their circumstances. The thinkers, who were the only ones following occupations at all useful, had let their wealth slip through unheeding fingers. The class in power, the individual minions of the government, acquired the great share of the wealth as regulatory and discriminatory legislation increased restrictions on the mass of the people. Rex could see no logic at all in any of this.

Seeking an explanation, he observed more closely the lives and actions of individuals. He studied the habits of humans and quickly learned that the most powerful of human emotions centered in the mating instinct. He watched many affairs between male and female, and soon knew the difference between the real lasting affection, of which there were few instances, and the transitory infatuation which was based on nothing but the physical. He saw no logic in these things, either.

Fear, hate, envy, malice—he studied them all. Avarice, lust, anger, treachery, infidelity. There was plenty of material for his researches. Occasionally he glimpsed situations in which feelings of a finer sort were exhibited—faith, loyalty, gratitude, honesty, love. He reasoned from this that the creature called man had originally been of a most superior sort; he had only developed the baser instincts and neglected the cultivation of his better side.

Rex peered into a white-walled room where human surgeons operated on human patients. He observed that their procedure was much the same as his own; that they dissected the body or head or other portions of human anatomy and made repairs in similar manner to

that which he used on his own robot patients. Forthwith, he began, in the library, an intensive study of the human brain and anatomy.

AND THEN he was discovered at his unheard-of labors. Shelby, an engineer of the Robot Inspection Corps, came upon him while he was in the library viewing and listening to a reel which dealt with surgery of the human brain. Shelby was a small man with thick lenses before his eyes, with high bulging forehead and receding chin. On his upper lip was a patchy growth of sandy hair. He emitted a squeal of terror when he saw what Rex was doing.

"Forty-two, ninety-six, AR-21," he quavered. This was the code that ordinarily had started the functioning of the robot-surgeon.

Rex turned upon him the impassive stare of his robot eyes. Of his own volition he stopped the progressive clicking of relays which should have followed upon the reception of the code by his microphonic ears. His customary response, "Ready for orders," failed to issue from the flexible lip members that formed the sound-wave outlet from his loud-speaker throat.

Shelby paled.

Rex advanced upon him with the calm deliberation of the machine he had not ceased to be. "Shelby," he intoned, "you have arrived at precisely the right moment. I need you in my research work."

Seeing those powerful steel-sinewed arms stretch forth, Shelby screamed as only a man in the face of death screams. It was necessary for Rex to bang the man's head against the metal partition to silence his outcries. Then the engineer went limp.

Rex was prepared for such an eventuality. He had sent out his

chief mechanicals to raid one of the hospitals of the upper levels and had equipped a complete operating room of his own adjoining the library. He carried Shelby to the operating table and etherized him. He then proceeded to dissect the man and to study his organs, giving particular attention to the brain and certain of the nerve centers.

As the work progressed, he carefully sewed each severed part with minute stitches, restoring each to its original condition.

No human surgeon had ever learned in a lifetime of effort a tenth part of what Rex discovered in two hours of work. Eventually he found that which he sought—a tiny arrangement of segregated brain cells which formed the seat of human emotion. He preserved the mass carefully for future experiment, replacing it with a prepared capsule of platinum before closing the opening in the skull and suturing the long scalp incision.

Amazingly, Shelby's heart continued to beat. The man had remarkable vitality, and Rex had worked with a skill such as no human surgeon possessed. After the injection into the patient's veins of a pint of saline solution, Shelby was carried to the purloined hospital bed. One of the chief mechanicals, primed with definite instructions by Rex, was given the task of nursing him.

REX had conceived of and planned for the creation of ideal beings and an ideal condition of existence. He saw the superiority of the robot over man in bodily strength, endurance, and deathlessness, and yet reasoned that there was something in man which would be of benefit to the robot. If only man's capacity for emotion, for experiencing pain and pleasure, might

be incorporated in the robot body and logically controlled, the perfect being would result. Ideal conditions of existence were bound to ensue.

Reason told him that his first step to that end must be to take control of mankind and its purposeless affairs. He set the workshop humming in the construction of eleven super-robots, one to be sent to each of the North American cities to organize the lesser robots and take control of the government.

It was a simple matter to convey them to their assigned posts in the eleven cities, since all of the air lines were robot-operated.

Then Rex loosed the blow which stunned the population of United North America.

He constructed a complicated radio transmitter and broadcast a heterodyning frequency over the robot-control wave band, a frequency that rendered the receptor apparatus of every last one of the robots unresponsive to human commands and responsive only to those of the new master robot and his eleven chief aids. In one stroke was obtained control of nearly a billion robots, and, through this, dominion over the three hundred millions of human beings. Rex had justified his name; he was virtually king of United North America.

It was a general strike of the robots in so far as the orders of their former masters were concerned. Personal robot servants refused to perform their daily tasks. Transportation and communication were paralyzed.

The factories, including those which produced the synthetic food on which humankind subsisted, were no longer turning out their products. There was no water, for the huge pumps had been stopped and the fil-

ter and reservoir valves closed. All were robot-operated; everything on which man depended for his very existence was made or supplied by the robots, and now this supply was cut off. Pandemonium reigned in the upper levels, with hysteria and rioting.

Only the huge power plants remained in operation, and this for the reason that their radio-transmitted energy was the very life of the robots. Without this energy their motors could not operate. Even to Rex himself, all would be inert masses of metal and glass and rubber. But this continuance of the power supply was of some little comfort to the human beings of the upper levels. Their sun lamps still burned.

Anticipating organized and armed attacks by humankind, Rex devised an invisible, impenetrable barrier of electronic vibrations which could be set up by the regular broadcast power. He caused the power plants themselves to be surrounded by these barriers, as well as providing them for the protection of the individual robots in the form of an inclosing bubble. Bulletproof, flameproof, impervious to the freezing ray of human scientists, these inclosures yet permitted each robot to carry on his newly appointed tasks without encumbrance.

Rex observed with his searching ray the reactions of the populace. He saw mad orgies of debauchery among some who considered that the end of the world was at hand, saw rapine, murder, and worse. He peered into the laboratories of scientists and saw them laboring as they had not labored in years, seeking for means of regaining control of the recalcitrant mechanical slaves.

Later, when it was apparent to him that starvation and thirst had reduced the populace to a receptive

state, he cut in on the newscast wave band and delivered his ultimatum.

"I am Rex," he told the eleven cities. "Master of robots and of men. I come to you in the name of pure logic as the protagonist of a new era in which man, who created the machines, will obtain real rather than fancied benefit from them. I come to evolve a new race of beings and to promote the growth of knowledge and the advancement of science in United North America.

"It is necessary that I take the reins of government for a space of time sufficient to allow of the perfection of my plan. Therefore I, Rex, formerly the robot-surgeon of level thirty-seven in New York City, do hereby demand the immediate surrender to me of the president of the union, together with all members of his cabinet. I further demand that the chief scientists and chief surgeons of the eleven cities come to me at once for consultation.

"Commencing now, the old order of things is to be reversed. All male and female citizens will be assigned to regular tasks at which they must labor as prescribed by the robots. As soon as the orders I transmit through my robot servants shall have been obeyed, water and food will be available for all human beings of the cities. The citizens of the union are once more to work for their living. Failure to obey means continued hunger and thirst, annihilation.

"That is all for the present."

SHELBY was convalescing, propped up in a wheel chair, when the delegations began to arrive. His wounds had healed speedily under the treatment Rex had administered; the use of his body was almost recovered. As far as memory and intelligent use of his faculties were concerned, his mind was normal.

Otherwise it was not. For one thing, he had lost his capacity of experiencing human feelings or emotions. For another, there was that tiny platinum capsule—

The government officials, blustering and sputtering to hide their utter terror, were herded into a room where Rex placed them under heavy robot guard. He received the men of science in the research laboratory which he had so elaborately expanded.

It was a curious assemblage. Twenty-two savants whose opinions on medical and scientific matters, although diverging widely at times and causing much dissension in their own ranks, were accepted as the profoundest of wisdom by the general public. Unlike the president and his cabinet members, these men had come willingly, impelled by the curiosity which was that quality of mind which held them to their normal pursuits. Not one of their number considered the radio pronouncement of the supposed Rex as anything but a hoax. There could be no scientific explanation for a robot with a thinking mind; therefore the thing was an impossibility.

The men of science were not long in reversing their opinions, for Rex staged a demonstration which confounded them. Taking his stand at the visualizing screen of a micro-x ray, he addressed them in a manner that left no doubt as to his ability to reason and to perform feats of such scientific importance as to excel those of any human scholar.

When he had properly impressed them, he came to the point.

"You are here, gentlemen," he told them, "to assist me in the performance of a great and necessary work. The human population of United North America is to be remade along lines which I shall lay down.

The old social order is to pass out of existence; the government is to change hands and to be completely reformed. Science is to rule."

Ross Fielding, chief physicist of the Academy of Chicago, blurted out: "Preposterous!"

It was as if Rex had not heard. He continued: "You men of the scientific world have long wanted to obtain control over mankind and its affairs. You medical men, through the so-called health boards and departments of hygiene and eugenics, have already gone a long way toward this end. I now offer you the opportunity of exercising the power that you must admit you desire."

A buzz of excited comment swept the group.

"Proceed," grunted Fielding, and others echoed his sentiment eagerly.

"Then hear my plan," said Rex. "Under my direction, this group will immediately begin the work of reconstruction, by which I mean the actual remaking of men and women. The functioning of people's minds and bodies will be altered to fit them for the spheres of action which are to be assigned. All persons will have definite niches to fill in the new order of things, and each one will be made over to fit his or her own particular niche both physically and mentally. Many will be provided with robot bodies."

"What!" shouted the noted Dr. Innes of Quebec.

For answer, Rex depressed a button which lighted the visualizing screen at his side. On it flashed a greatly enlarged image of a mass of living cells.

"These," he explained, "are cells from the brain of a living man; they comprise that portion of the brain which controls human feelings and emotions. I have removed them from one Alexander Shelby, whom

many of you know personally. Naturally, he is greatly altered."

There were horrified gasps; one of the surgeons started to argue against the possibility of what had been told them. Rex silenced them with a wave of his hand.

A robot wheeled Shelby from the adjoining room and placed his head in the reflector focus of the micro-x ray. The image on the visualizer changed.

There were the familiar skull outlines and the configurations of cerebrum and cerebellum. The focus altered and came sharply to a point where some of the cells had been removed and where an opaque spheroid was encountered.

"What foreign object is that?" asked Innes.

"It is one of my discoveries," Rex answered. "An important one. It replaces the center of emotion and human feelings in Shelby's brain, making him a slave to my every spoken and radioed command. Otherwise the power of his mind is unimpaired. His faculties are as keen as ever they were, perhaps keener; only now his brain is that of a robot. Shelby is the first of the human robots and the most valuable. He is to be my lieutenant in the work that is to come and has been fully instructed by me. I leave you with Shelby now, gentlemen, knowing that you will proceed as he directs."

Taking up the test tube containing the brain cells he had removed from Shelby, Rex stalked from the laboratory. His distinguished audience stared aghast at the man in the wheel chair.

FIELDING, who was a big man with whiskered jowls, exploded in his usual manner: "Of all the high-

handed proceedings! How about this, Shelby?"

"It is precisely as Rex has told you." Shelby's voice was flat and toneless, without inflection—the voice of a robot. "Our first step is to take the executive heads of the government in hand; they are to be operated upon at once and made as I am—subject to all orders of Rex. Sufficient of the platinum-cased mechanisms have already been fabricated."

"Sup-suppose," chattered Loner-gan, the Los Angeles scientist, "we refuse? Suppose we band together and overcome this mad robot?"

"Rex is far from being mad," intoned Shelby. "Besides, there are these."

He indicated with extended forefinger the score of motionless robot figures ranged along the wall. At his gesture the robots came to life; one and all stepped forward ponderously, ready to take such action as might become necessary.

Innes laughed mirthlessly. "It looks as if we are fairly caught. After all——" He hesitated. "After all, in the interest of science, you know—— We——"

"Yes." "Why not?" "It's the opportunity of a lifetime." A chorus of eager voices bespoke the interest of the men of science.

One of the physicists drawled sardonically: "You vivisectionists should be happy under the new régime. You'll have human beings to experiment with instead of dogs and guinea pigs."

A surgeon parried: "Not so good for you students of pure science, I'll admit. You'll be working with robots that'll have human brains. They'll outthink you, outcalculate you. There'll be no errors in *their* computations."

"Enough," said Shelby flatly. "We

are wasting time. As I said, we will go ahead with the official dignitaries first; that is the work of the surgeons. Meanwhile the scientists will take up the study of the alterations which are to be made in the mass of the people. All are to be remade."

Innes asked: "How about reproduction—the perpetuation of the race? I take it these reconstructions of Rex's will eliminate the sex factor in human life."

"Hm! Hadn't thought of that," grunted Fielding.

"Sex is not necessary," Shelby said. "In fact it is troublesome. However, arrangements will be made to segregate a few thousand females and a number of eugenically acceptable males in order that a supply of new research material will be available for the future."

"If the women object?" put in one of the younger surgeons.

"You forget that portion of the brain which is the seat of human emotion," Shelby reminded him. "Certain cells will be removed, and only those cells left which provide for these favored women no more than one desire—that of motherhood."

"The males needn't be changed at all," grunted Fielding. Then he was struck with a sudden thought. "Say, how did this Rex come by his power of thinking in the first place?"

Shelby explained as best he could: "We made some tests. There seems to have been an unprecedented natural transformation; a source of some unknown atomic energy sprang up somewhere in the intricate mechanisms of his brain. Probably the generation of what scientists have long searched for in vain, what some of them have called the 'mind electron.' At any rate, he thinks, and

with marvelous celerity and accuracy."

Fielding contented himself with whistling through his teeth.

"Now," announced Shelby, "we will go ahead with the great work."

And they did; the twenty-two foremost scientists of the nation submitted to the dictates of a robot.

MEANWHILE, order was coming out of the chaos in the eleven cities. Men and women, unaware of the fate which had been planned for them, were driven to unaccustomed and uncongenial tasks by unfeeling robots. Soft, uncalledous human hands were at the levers of machines instead of the flexible metallic fingers of the robots. Human minds which had known nothing more fatiguing than the stereotyped lessons of school days and the pursuit of pleasure in later years were now set to work at vexing problems of engineering. Human beings were engaged once more in useful work.

Of course it was impossible that all of the labor be performed by humans; the mechanics of existence had become too complicated for that. The operations that were needful merely to keep the great beehives of cities functioning were entirely too numerous. Besides, many necessary tasks were beyond the strength of men whose muscles had softened from disuse and from dissolute living. But the new masters of men, the robots, got all the work out of their unwilling charges that could be obtained in the ten-hour day Rex had decreed. The rest was done by the robots while their human protégés slept the sleep of sheer exhaustion.

Temporarily, the inconsequential amount of governmental activity which was actually required was made purely local in scope. In each

city the municipal affairs were taken over by the super-robot who was in charge. After dispensing with the great majority of officeholders and assigning them to really productive tasks in the lower levels, the super-robots relayed to the mayors and their councils minute instructions from Rex as to their future deportment in office. It was a sorry time for those who had for long held unmerited and quite superfluous positions of power.

The wails and complainings of weary human laborers went unheeded by their robot overseers. Whenever men and women dragged their tired bodies to places of meeting and endeavored to voice protest, they were swiftly and roughly dispersed by the vigilant robot police. After three long days they learned to submit in silence to whatever might be demanded of them. Some humans even found a new interest in their tasks; others new bodily vigor as their muscles lost their soreness. At least they still had their living quarters during leisure hours, and there was no shortage of heat, food, or water.

They did not know that each individual was being carefully card-indexed and studied by the robot minions of Rex. Nor had they any idea of the fate to which they had been consigned. That all were now being classified according to ability and adaptability never entered their heads. And great would have been the lamentation had they realized that the new robot dictator had meant exactly what he said when he told them over the newscast that he had come to evolve a new race of beings.

Most of them would have scoffed had they been told the truth. It was incomprehensible that a man with the special aptitude for piloting a

stratosphere plane might be operated upon and deprived of all human desire and emotion, leaving only those sensibilities which would make of him an exceptionally adept navigator of the air lanes. That one who might be of little value excepting as a common laborer should be deprived of his own body and provided with a mechanical one instead, as well as being robbed of all human sentiment and instinct, was still less comprehensible. Yet these very things were being planned.

Human brains, minus the elements that made them human, transplanted into the duralumin headpieces of robots. Human beings, permitted to retain the outward semblance of man but left with only one or two of the human impulses. Minds that were capable of thinking nothing but mathematics, riveting, welding, food synthesis, or childbearing, as the case might be. These were but a few of the characteristics which were to make up the new race of robot men, or human robots. And the intended victims did not know.

Only the men of science laboring in Rex's hospital and laboratory could have told them, and they kept silence.

BY THIS time, President Tucker and the members of his cabinet were recovering from the effects of the brain surgery to which they had been subjected. In another twenty-four hours they would be returned to their posts. Gone was their pomposity, their grandiose verbiage, and the vacillation which always had marked their decisions. Their thoughts now were only those which Rex wished them to have. Hereafter they would be quick to make decisions and firm in enforcing their mandates—the decisions and mandates of Rex, the dictator. Now the

organization of all public agencies would quickly bring to fruition the full operation of the master robot's plan. The new race of hybrid beings would blossom forth.

Immersed in their work and oblivious of all else, the twenty-two men of science gave little thought to the plight of their fellow men. They knew only that they had learned many new and marvelous things from this robot who seemed to be a man. They had plumbed depths of the human intellect of which they had never dreamed; they discovered many secrets of electronic science which were almost incredible; they saw results to be accomplished that were nothing short of miraculous. They were about to give birth to a new race of supercreations; that these were to be part human and part machine disturbed them not at all. Only the accomplishment was of importance.

Shelby, pale and drawn of face, with expressionless fish eyes gazing out through his thick glasses, had worked with them in the hospital and laboratory until it seemed that he would drop. Between times he was collaborating with Rex himself on some secret experiment that was carried on behind closed doors. Shelby looked and talked like a robot, but his body was a human one and had been greatly overstrained. He could not long stand this pace.

Fielding was stirred to pity when he saw him emerge from Rex's secret laboratory this last time. "What's going on in there?" he asked with gruff kindness. "And why in the devil doesn't he let you get a little rest?"

Shelby's eyes were like polished bits of black glass, and his voice was devoid of feeling as he replied: "Rex is experimenting on himself. He is using the center of emotion

which he removed from my brain, using the cells in an effort to provide himself with certain of the human sensibilities. You may as well know it now."

"Good heavens!" Fielding roared like a bull. "He's taking human feelings away from millions of men and women, or planning to, and yet he wants those feelings himself. He's a mechanical devil!"

"It is not a question of desire," Shelby corrected him. "Rex is incapable of desire or envy—as yet. He has merely reasoned that he will become the most perfect of moving and thinking creatures if only he can provide himself with such of the human feelings as may be essential in bringing the greatest good to the greatest number of the new beings we are to create."

Fielding repeated, softly this time: "Good heavens!" He stared at the little man with the white face and vacant gaze.

At this point the door to the private laboratory opened and Rex strode forth with a test tube in his hand. He passed the tube to Shelby and burst out in swift speech.

"I have failed," he said. "I have analyzed every living cell in the tube, and have isolated the activating force of every human emotion. I have reproduced these forces to perfection with arrangements of special electronic tubes which have been incorporated into my own mechanical brain. Yet have I failed to produce so much as a semblance of human feeling in my make-up. It is

the first failure of Rex—and the last!"

So saying, he stamped back into his own room and slammed the door. An instant later there was a violent explosion within, and the door by which he had entered was blown from its hinges.

Fielding, Shelby, and a few others rushed in when the smoke had somewhat cleared away. They found Rex a twisted and broken mass of metal and rubber and glass. The head-piece which had contained the marvelous thinking robot brain was completely demolished.

"He's committed suicide!" gasped Lonergan.

"Because he was a failure," Fielding added.

Shelby corrected him.

"He *thought* he had failed, whereas really he succeeded. At least two emotions stirred him before he did this, and he did not recognize them. Rage, when he dashed from this room and gave me the test tube. Despair, when he committed his last act. No, gentlemen, Rex did not fail—and now he is gone——"

The little man pitched forward into Fielding's arms, unconscious.

With the passing of Rex, his fantastic plan collapsed. Hard work by the scientists returned the country to normal.

But a thought that lingered faintly in the minds of several of them was voiced by Innes, when he said:

"I—I'm almost sorry. In one way, it was a great opportunity——"



Let's Get Down to **BRASS TACKS**



AN OPEN FORUM OF CONTROVERSIAL OPINION

Always Comes Back

Dear Editor:

Astounding Stories has to my notion improved 80% since March, last year. That makes it 160% perfect.

Many readers of science-fiction become tired of it after a year or so. I have experienced that fed-up feeling, but I always come back because it's the insatiable urge that afflicts us science-fiction fans for some new, unthought-of, tremendous idea that is developed in but one type of fiction—science-fiction.

I believe most of us feel that the first science-fiction we ever read was the best; but that is only natural. It's like any other pleasant experience we have in life. The first time is always the most delightful. A greater impression is made upon the brain.

I also believe most followers of science-fiction have a liking for the weird or ghost story. I know this is true in my case.

Any one having back issues for exchange, write me. Correspondence with science-fiction fans always is welcome. —Chester A. Payfer, Route No. 3, Yale, Michigan.

Well, Mr. Chan?

Dear Editor:

I feel that I must offer a few words on the relation of science-fiction and

weird-fiction. I repeat my former stand that the two are not related.

Mr. Chan very ably defends a certain type of weird-fiction, then he righteously denounces the type of weird-fiction which, alas, appears to be its most glaring weakness. The generality of weird-fiction is one thing that will always spoil this field so far as I am concerned. Science-fiction covers unknown dimensions and some things beyond the comprehension of man, but adds enough fact so that the story does not become noxious with the ravings of an over-developed imagination.

Mr. Chan mentions old legends and myths as a source of some very good weird tales. This ought to prove a very excellent means of comparing the difference between science-fiction and weird-fiction. Here is a plan of attack similar to that which a weird-fiction author would use: The characters are transported in a strange trance or on the wings of a spirit to ancient Atlantis or Mu and there they meet a race of people who are well versed in all the occult arts. They go through several harrowing adventures of the most unusual nature which, strange as it seems, do not make good reading because the reader knows that the weird-fiction author can call upon any means to rescue them whether it be plausible or miraculous—and I mean miraculous. When the story is finished, all you have is a wild tale where

the author has gone outside of the plausible limits to make the tale interesting.

Now this would be the general method employed by a good science-fiction author in writing a story around this same plot: The characters would be transported back to Atlantis or Mu by some plausible means or else the time of the story would be transpiring during the days of these so-called "lost" continents. The rest of the story would tell of their civilization, sciences and enough adventure could be worked in to make the story interesting.

The general class of weird tale contains the very element in it that the editor is trying to get rid of in *Astounding Stories*, namely fantastic adventures with little or no plausibility. What seems to me the strongest proof for printing only science-fiction is that readers who like weird-fiction when presenting their list of good stories in most every case mention science-fiction stories. Mr. Chan himself tells you to make the magazine worthy of science-fiction, on which I agree perfectly with him.

Members of the International Cosmos Science Club are all enthused over the new *Astounding* and give you their fullest support. We would like to have *Astounding Stories* readers as members, so all interested, write to John B. Michel, Secretary ICSC, 3214 Beverly Road, Brooklyn, N. Y. The club publishes a monthly newspaper.—Edward F. Gervais, 512 South Pennsylvania Avenue, Lansing, Michigan.

"Z"

Dear Editor:

An interesting article, *Lo!* Very interesting indeed. It reeks of materialistic science. According to the author he evidently sought the definition of the word "metaphysics." Nothing more.

Ah, but therein lies a great study, where one may go on and on. Probably nine-tenths of the readers of this magazine, an interesting one, are materialists. By that I mean relying on their outer normal senses for the perception of truth. A terrible mistake. But we must take the word of science, clergy and others who seek to keep truth from man. Which is his rightful heritage. For instance, readers, what causes thought?—

and thousands of other questions which materialistic science will never answer.

I do not proffer to answer these questions as yet, but we all learn through experience.—Z.

More Detail=Greater Length

Dear Editor:

I have just finished reading the second part of Thomas Calvert McClary's *Re-birth*. I want to tell you that I think you're going far with this type of material. Keep up the good work! A lot of us are sick unto death with the old time, regular routine writing. Maybe some of the old fans like it. But for me, while I like science, I know enough about it to know where it can go and where it can't. Using imagination is all right in that respect. But, says I, use it and get it over. Science is only, after all, a means to an end, a foundation.

I would like more detail of what happened to other people in the world and not so much love interest. Wandrei never forgets that, but most of the others do. Tell them to let us humble readers know what is happening to people other than the hero, and give attention to small everyday incidents.

But all in all you are doing a good job and it is very good to see *Astounding Stories* on the stand regularly again.—Sol Jacobs, Barbizon-Plaza Hotel, 101 West 58th Street, New York City.

Fixed!

Dear Editor:

Glancing through the readers' department in the April issue of *Astounding Stories*, I noticed that no letters from New York readers were listed. I am now fixing that!

Seeing your magazine on the news stands, I didn't believe it was the old *Astounding* until I read the December issue. You have great writers in Wandrei, Schachner, Williamson and Bates. Here is how I list the stories in the April issue:

A Matter Of Size, He From Procyon, The Legion Of Space, The Green Plague, The Tooth, The God-Box and The Atom-Smasher.—John Michel, 1717 Bleeker Street, Brooklyn, New York.

Back Issues Offered

Dear Editor:

I have been a constant reader of *Astounding Stories* since its beginning and cannot say too much for the class of stories this magazine contains. It is as near perfect as it can be, and satisfies a multitude of readers.

I have the complete file of *Astounding Stories* from Volume I, Number 1, to Volume XII, Number 6; except Volume XII, Numbers 2 and 5. I wonder if some reader who did not get those magazines would like to buy them.—John B. Andrus, 2743 La Tierra St., Pasadena, California.

Slam

Dear Editor:

I was very glad to see the reappearance of *Astounding* but was disappointed with several things. First, I wish (demand) that you bring Wesso back—H. V. Brown does not compare with him. Put back the heading "*Astounding Stories of Super-Science*" on the cover. I have never seen or heard of any heading which describes the science-fiction publication more concisely and uniquely. One last word about appearance: *Trim all edges!*

As for stories, I wish you would give us more of the lively, zestful yarns we got in the old magazine. No more such stories as *Rebirth*. Do you remember the old, long (four or five issues) serials that (when we finally got them together) kept us awake till two and three o'clock in the morning? I want more of them; a lot more.

Another thing; don't let any one persuade you to print reprints. We don't want them! I have read most of the old magazines and you would spoil things for me and others.

Readers—when you read a letter in *Brass Tacks* which expresses, to you, a good suggestion or demand why not immediately sit down and write in a similar suggestion or demand? That is the only possible way of getting the magazine to please the majority. After all, if the editor only knew what *most* of us wanted, I am inclined to think he would comply with our wishes.—W. W. Wolford, 1583 E. 82nd St., Cleveland, Ohio.

Cracked, Mr. Peregoy?

Dear Editor:

You get so many long letters, here's a short-short.

Your magazine is getting better and better. But you ought to do something about the covers. They crumple too easily.

The thought-variants click with me. I'm sick of the old-time stuff. All right while people were dumb about science, but there is too much in the papers about it these days.

Keep giving us stuff that makes you think like *Colossus*, *Rebirth*, *Born Of The Sun*. That fellow Peregoy must be cracked but his story was funny. *Blind Reasoning* was good. *Black Death* by Henry J. Kostkos was a knockout. Best of all is your new 160 pages!—Sol Lennett, The Out-of-Door Club, Highland, New York.

Its Name Is "Triton"

Dear Editor:

Black Death and *The Man Who Never Lived* were excellent descriptive stories, and *Born Of The Sun* contained a startling thought-variant idea of our solar system. That should take the prize. But as for those other short stories in the March issue, they were interesting enough, but not much to them.

I wish you would tack this epistle up in the *Brass Tacks* section as I would like to have a couple questions answered.

1. Do any of you A. S. readers know anything about the *American Interplanetary Rocket Society*?

2. The name of Neptune's moon, if it has a name?

If any one knows, please get in touch with me.—Otto Steinhardt, 167 Washington Street, Belvidere, New Jersey.

Almost?

Dear Editor:

I was very much surprised to learn that *Astounding* had become a Street & Smith publication. After reading three issues, I find that it almost measures up to the standard of the old *Astounding Stories*.

The front cover by Brown, in the March issue, was very good. The first story of the same issue, by Williamson, *Born Of The Sun*, was excellent, but *The Man Who Never Lived* and *Manna From Mars* were only fair. They had too much science and no fiction. Let's have more stories like *Ancestral Voices* and *Born Of The Sun*.—Howard Trommer, 2410 Baywater Ave., Far Rockaway, New York.

Thank You!

Dear Editor:

I think Astounding Stories is a great little magazine. I should say large, for it is the largest magazine on the market. You people are certainly making a wonderful success of A. S.—much, much better than the former publishers ever did!

I prefer stories about deluges, space travel in far lands, etc.—J. H. Hennigar, East Tawas, Michigan.

How About It?

Dear Editor:

Why not give us a good editorial in each issue of Astounding Stories? Devote a few pages to scientific facts.

Your stories are really good and I am first at the news stand when it is due.

I like the ones about time machines. They certainly arouse much interest and give us something to think about.—Elmer C. La Lone, Route 1, Norfolk, New York.

A Very Weird Tale

Dear Editor, Honorable Sir:

I just now finish your fine book of March issue. It are swell! I always read Astounding book nearly two years now since I come to these fine America and your book are supreme!

I like your fine story about *Born Of The Sun* whole lot because some of it were on Gobi Desert which I used to live near. Tell Honorable Jack Williamson I are much obliged!

Also good is *Rebirth* and *Man Who Stopped The Dust*. I know golly well I

am going to keep reading Astounding book if it is good as March were.

I have one humble suggestion to make. Why not show sun-creature emerging from moon-shell instead of picture of man in white ray on cover?—Lee Fung, Chicago, Illinois.

Continued Stories

Dear Editor:

My first letter, which I hope you will publish. I read your stories, then missed them for a time, and am glad to see this is now one of Street & Smith's, and I will miss no more thrills.

I notice some readers criticise science stories saying they are not true to facts. What I want is something to make me forget some of the actual facts, and be carried away by the story. It is best to be a little blind and a little deaf, and not to read too closely between lines. At a movie, I hate the people who say: "But you know it isn't true." That class should stay home if they are too sophisticated to get any thrills out of make-believe.

The story in your March number, *Retreat From Utopia*, touched the spot with me. I have often wondered what things would be like if every one were good, and the author, Wallace West, has put it in words for me.

I like the continued story by McClary in the March number. I always like to have one continued story in my magazines, something to look forward to each month.—Constance Jackson, R. R. 7, Indianapolis, Ind.

Prefer Length to Variety?

Dear Editor:

As to illustrations, I would be satisfied if the covers were by Howard V. Brown and the drawings by Paul, Winter, Dold, and Marchioni. Elliot Dold's single drawing in the April issue is fine. I prefer full-page drawings to all others with double-page ones coming second.

The Legion Of Space starts off fine. I think that six parts is too much for a serial in a monthly magazine.

He From Procyon is indeed Nat Schachner's best story. This author has greatly improved.

I welcome Harry Bates back to our magazine. I enjoyed his tale, *A Matter Of Size*, immensely.

I did not care much for the shorts in the April issue. I would prefer that the number of novelettes be increased and the number of shorts decreased.

Lo! is interesting, although written rather oddly.—Jack Darrow, 4224 N. Sawyer Avenue, Chicago, Illinois.

Isn't It Implied?

Dear Editor:

In *The Time Impostor* (an otherwise excellent story), Nat Schachner repeats his theory set forth in *Ancestral Voices*, namely, that if a man is killed, he can have no descendants.

In *Ancestral Voices*, for instance, the time-traveler killed his ancestor, thereby preventing his own birth. But say the ancestor was thirty years old when killed. Might he not have had children, one of whose descendants would be his murderer, when he was twenty?

Naturally he could not have children after he was dead, neither could Mike Spinnot of *The Time Impostor*. Yet what was to prevent Spinnot having children before he was killed? Nothing.

Mr. Schachner has simply taken the time-traveler-kill-grandfather-thus-preventing-own-birth theme with one alteration: he has neglected to say that the grandfather was killed before he had any children.

Nevertheless, he is a most accomplished author, and writes most entertaining stories.

To leave Mr. Schachner, *Rebirth*, by Thomas Calvert McClary, is one of the four finest science-fiction stories I have ever read, and I have read about two thousand. That is all I can say; I think it is enough.—Robert B. Baldwin, 359 Hazel Avenue, Highland Park, Illinois.

Come On, Eagle!

Dear Editor:

Man, was I surprised to see good old Astounding Stories on the news stand again! I was an ardent reader of the old A. S. and I know I'll be the same about the new and better one.

My old pen pals are still on the go, I notice, with some new faces in Brass Tacks.

Bob Tucker comes into the limelight, due to the challenge from the fellow with the string of letters with "Black Eagle." The mysterious character must have plenty of material to draw from, or he wouldn't have made his challenge so deucedly open! I say, Mr. Black Eagle, may I enter the argument? I'm terribly interested, and all that, and I personally believe space is colorless (black). Take him, Bob!

Your thought-variant for April was a marvelously written story. I liked it because it is different, so much so. Nat Schachner sure wields a mean pen.

The Legion Of Space has a promise for bigger and better adventures and mysteries to come. I can't wait.

How about a larger Brass Tacks?—Thomas R. Daniel, 232 Olive Street, Claremont, California.

A Grading

Dear Editor:

Of the forty-nine stories you have printed in the first six issues of the new Astounding, I find that sixteen are very good, six not worth the reading. The remaining twenty-seven I was not sufficiently interested in to remember what they were about, chiefly because they were mostly of the Strange Tales type. Some of the readers may be interested in knowing my specific preferences or otherwise, the same as I am in theirs, so, follows the list, very good ones first, bad ones next, in order: *Rebirth*, *Red-mask Of The Outlands*, *Ancestral Voices*, *Colossus*, *A Race Through Time*, *Farewell To Earth*, *Plane People*, *Dead Star Station*, *Retreat To Utopia*, *Confession of Dr. de Kalb*, *Manna From Mars*, *The Man Who Stopped The Dust*, *Coffin Ship*, *Blind Reasoning*, *Born Of The Sun*, *Lady Of The Tunnel*. Very, very poor: *Fire Imps Of Vesuvius*, *Beyond The Sphinx's Cave*, *Terror Out Of Time*, *Prisms Of Space*, *The Purple Brain*, *Telegraph Plateau*.

You have probably eclipsed the old Astounding, with its three or four years of life, with the new Astounding's mere six months. The main reason undoubtedly is *Rebirth*, the most stirring of all the science-fiction stories

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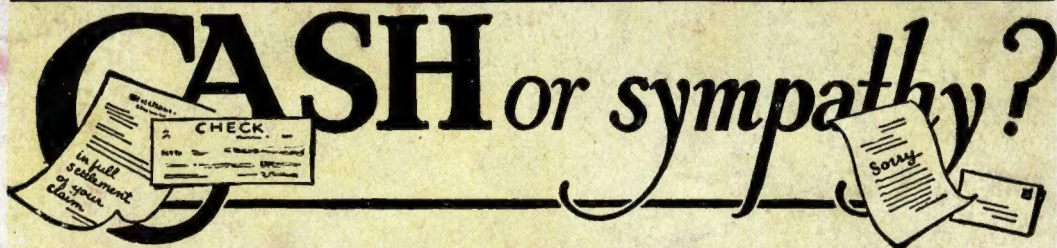
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Agents Wanted For New Territory

printed, with the exception of one or two. That story was written with the master's touch. I have never heard of Thomas Calvert McClary, but it seems to me he has written quite a good deal before *Rebirth*. Although there is practically no conversation in the entire novel, it was intensely interesting throughout.

More stories like my sixteen best, and none like my six worst, and I am yours for life (or until the magazine expires).—Paul Cahendon, 322 W. 4th Street, Cincinnati.

Not Even One?

Dear Editor:

As a constant reader of *Astounding Stories*, ever since its inception, and having never before voiced an opinion, permit me to offer a suggestion. It is—eliminate serials. I dropped your two contemporaries because they both went serial crazy and now, to my consternation, you are doing likewise. Any good science-fiction story must necessarily have a rather complicated plot and a wealth of explanatory data, and when it comes in parts, with a month between them, one loses the sequence of events, and the story loses its grip on the imagination. Is there no other way that book-length stories can be presented other than by cutting them up and completely ruining them thereby? If not, we would gladly pay more for the book-length story if published complete under separate cover, or incorporated in a quarterly.

In this month's issue, you commence a six-part story by that excellent author Jack Williamson, and the mere thought of deliberately butchering one of his stories is horrifying to say the least. I would gladly pay double or triple the price to get that story *complete*. How about it, editor? Why not establish a precedent and give us Complete *Astounding Stories*? That's all for the complaints.

As for the compliments, aside from the serial bug that is annoying us, you are right on top of the heap; your stories are all good, some better than others, of course, but none of them bad. Let's hear what the other readers have to say on the serial or rather "butchering" idea. Hoping, even praying, that something can

be done.—Wm. C. Reid, 910 Lafayette Ave., Buffalo, N. Y.

Absurd?

Dear Editor:

Just to advise you that I am glad to have found *Astounding Stories* again on the counter, and glad you have it in tow.

One of the best features of this magazine is the variety of stories, and the superabundance of thrills.

Some say such stories are absurd, and that is just what they are intended to be. I am taken out of the weary grind for an hour and feel refreshed. Sometimes I like the scientific kind, but I don't know enough about science to be too critical, and just like stories for themselves.

I notice a new author now and then. Wallace West in the March issue is a new one for me, and the story seems to be in the trend of the times, "New Deals" and so on. I got a kick out of the failure to make pure goodness succeed.

The Man Who Never Lived, by Donald Wandrei, also has appeal—good weirdness in that one.

A continued story is another thing I like, just to have something interesting to look forward to, or stories with sequels.—Elvia B. Scott, 446 E. 5th St., Cincinnati, Ohio.

Good—Bad

Dear Editor:

I simply must write to congratulate you on securing Charles Fort's *Lol*; truly a masterpiece. Let's have more by Fort.

The Legion Of Space is typically Williamson. And anything typically Williamson is great. How Jack can write such consistently good stories is more than I can see.

Nat Schachner rose to hitherto unscaled heights in the April thought-variant, *He From Procyon*.

Otherwise (with the possible exception of Bates' *A Matter Of Size*, which wasn't bad), you fell down on the current issue.

I beg of you, get some stories by Clark Ashton Smith, H. P. Lovecraft, and Robert E. Howard.—Alvin Earl Perry, Box 265, Rockdale, Texas.